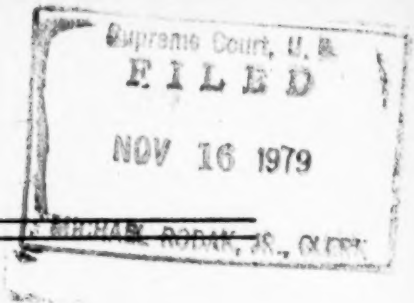


**APPENDIX**

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**In the Supreme Court of the United States**

OCTOBER TERM, 1979

No. 78-1918

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ADLENE HARRISON, REGIONAL ADMINISTRATOR,  
AND DOUGLAS COSTLE, ADMINISTRATOR OF  
ENVIRONMENTAL PROTECTION AGENCY,  
PETITIONERS

—v.—

PPG INDUSTRIES, INC.

---

ON WRIT OF CERTIORARI TO THE UNITED STATES  
COURT OF APPEALS FOR THE FIFTH CIRCUIT

---

PETITION FILED: JUNE 25, 1979  
PETITION GRANTED: OCTOBER 1, 1979

**In the Supreme Court of the United States**

OCTOBER TERM, 1979

**No. 78-1918**

ADLENE HARRISON, REGIONAL ADMINISTRATOR,  
AND DOUGLAS COSTLE, ADMINISTRATOR OF  
ENVIRONMENTAL PROTECTION AGENCY,  
PETITIONERS

—v.—

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ON WRIT OF CERTIORARI TO THE UNITED STATES  
COURT OF APPEALS FOR THE FIFTH CIRCUIT

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\* The entire administrative record was included as a single exhibit in the record on direct review, with the separately numbered pages indicated here in brackets. The administrative record is included in entirety, except as noted.

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## RELEVANT DOCKET ENTRIES

[Title of Court Omitted in Printing]

PPG INDUSTRIES, INC.

v.

ADLENE HARRISON, REGIONAL ADMINISTRATOR,  
AND DOUGLAS COSTLE, ADMINISTRATOR OF  
ENVIRONMENTAL PROTECTION AGENCY

DATE	PROCEEDINGS
October 4, 1977	Petition for Review
November 10, 1977	Order granting motion of Continental Oil Company to Intervene
December 7, 1977	Certified list of administrative record filed
May 10, 1978	Case Argued
January 8, 1979	Opinion and judgment entered
January 22, 1979	Respondents' motion for extension of time to file petition for rehearing granted to February 5, 1979
February 5, 1979	Respondents' petition for rehearing and rehearing en banc
February 26, 1979	Order denying petition for rehearing and rehearing en banc
March 6, 1979	Judgment as mandate issued

IN THE UNITED STATES COURT OF APPEALS  
FOR THE FIFTH CIRCUIT

No. ———

PPG INDUSTRIES, INC.  
Box 1000  
Lake Charles, Louisiana 70601, PETITIONER

v.

ADLENE HARRISON, as Regional Administrator,  
Environmental Protection Agency  
Region VI  
1201 Elm Street  
First International Building, Suite 2800  
Dallas, Texas 75270

and

DOUGLAS M. COSTLE, as Administrator,  
ENVIRONMENTAL PROTECTION AGENCY  
401 M Street, S.W.  
Washington, D.C. 20460, RESPONDENTS

PETITION FOR REVIEW

PPG Industries, Inc., hereby petitions the court for review of the orders and determinations of the Environmental Protection Agency (a) that two "waste heat" boilers, which are component parts of "Power Plant C" in the chemical manufacturing plant of PPG Industries, Inc. at Lake Charles, Louisiana, are subject to provisions of Standards of Performance for Fossil Fuel Fired Steam Generators, 40 C.F.R. § 60.40, *et seq.*; (b) that, pursuant to the Standards of Performance for Fossil Fuel Fired Steam Generators, PPG Industries, Inc. may fire in its waste heat boilers only a fuel which contains a sulfur content equal to or less than a sulfur level to be specified as a result of performance tests conducted in compliance with the Standards; and (c) that, pursuant to the Standards, PPG Industries, Inc. must install and

operate continuous opacity monitors in the stacks of the boilers in Power Plant C and also may be required to monitor and report on the sulfur content of the fossil fuel burned in the boilers. These orders and determinations were issued and entered on June 8, 1977, August 3, 1977, and August 18, 1977. They have not been published in the *Federal Register*.

Respectfully submitted,

/s/ Oliver P. Stockwell  
OLIVER P. STOCKWELL  
Attorney for Petitioner  
Stockwell, Sievert, Viccellio,  
Clements & Shaddock  
One Lakeside Plaza  
P.O. Box 2900  
Lake Charles, Louisiana 70601  
(318) 436-9491

/s/ George P. Cheney, Jr.  
GEORGE P. CHENEY, JR.  
Attorney for Petitioner  
PPG Industries, Inc.  
One Gateway Center  
Pittsburgh, Pennsylvania 15222  
(412) 434-2145

/s/ Charles F. Lettow  
CHARLES F. LETTOW  
Attorney for Petitioner  
Cleary, Gottlieb, Steen & Hamilton  
1250 Connecticut Avenue, N.W.  
Washington, D.C. 20036  
(202) 223-2151

Dated: October 4, 1977

[Certificate of Service Omitted in Printing]



April 17, 1972

*Key Letter*

Mr. Milan C. Miskovsky  
Debevoise & Liberman  
Shoreham Building  
Washington, D.C. 20005

Dear Mr. Miskovsky:

Your March 24 letter requested our advice regarding applicability of the Standards of Performance for New Stationary Sources (40 C.F.R. Part (8), particularly the nitrogen oxide standards, to a General Electric combined combustion turbine and steam generating plant purchased by a member of General Public Utilities Corporation for addition to the existing Gilbert electric generating station in New Jersey.

The combustion turbine facility clearly is not subject to the present Federal regulations, and both the combustion effluent and thermal energy from the turbine may be discharged to the atmosphere without being limited by the standards. There would be no logic, then, in permitting an owner or operator who chooses to use the exhaust heat, which otherwise would be wasted, in a waste heat recovery steam generator unit, with or without supplemental fuel.

Accordingly, we agree that both the heat input and the emission contribution of the combustion turbine will be excluded in determining whether the steam generating plant complies with the standards. Compliance will be judged only on the amount of heat and combustion effluents added by supplemental fuel used in the waste heat recovery steam generator, which is the affected facility.

We appreciate the concise explanation and clarity of your letter. Please communicate with us whenever we may be of assistance.

WILLIAM H. MEGONNELL  
Director, Division of Stationary  
Source Enforcement

cc: Region II—w/cy incg  
Don Goodwin " "  
Bob Baum " "  
Bob Walsh " "

[Illegible material notations omitted in printing; italicized material is handwritten marginal notation]

UNITED STATES ENVIRONMENTAL  
PROTECTION AGENCY

DATE: 2 Mar. 1976

SUBJECT: Determination of Applicability—  
Chevron Oil Co., Perth Amboy, New Jersey

FROM: Attorney-Advisor, Enforcement Proceedings  
Branch  
Division of Stationary Source Enforcement

TO: Kevin Healy, Attorney  
General Enforcement Branch  
Enforcement Division, Region II

As per our telephone conversation of February 25, 1976, the following confirms our discussion of the applicability of New Source Performance Standards to new petroleum refining and storage facilities of Chevron Oil Co., to be located in Perth Amboy, New Jersey.

#### BACKGROUND

Chevron plans to construct new petroleum refining and storage facilities in Perth Amboy, New Jersey. A contract for construction of the off-plot facilities (storage tanks and vessels) was entered into in February of 1973. A construction contract for the on-plot (refining facilities, e.g. catalytic cracking units) was entered into on June 15, 1973. The source did an environmental impact study of the proposed facilities sometime prior to February 1973.

It must be noted that the applicability date for NSPS for petroleum refineries and storage vessels for petroleum liquids is June 11, 1973 (date of FR proposal for these standards). Where construction of facilities was commenced after that date, the facilities are subject to the applicable standard.

#### DISCUSSION

Clearly, the planned storage vessels at the Chevron facility are not subject to NSP since their construction

was contracted for prior to June 11, 1973 (i.e., in February 1973). The refining facilities, considered separately, would be subject to NSPS since the construction contract was entered into on June 15, 1973, four days after the proposal date of the standard. The company has claimed an exemption for the refining facilities based on the contract date for the storage vessels, arguing that the entire new construction is so integrated as to make the contract date for the off-plot facilities the "commerce construction" date for the on-plot facilities.

Storage vessels and refining facilities (e.g. catalytic cracking units, catalyst regenerators) are separate "affected facilities" within the definitions of 40 CFR Part 60. As such, they must be considered separate from each other for the purpose of NSPS applicability. Note that the definition of "construction" in 40 CFR § 60.2(g) means "fabrication, erection, or installation of an ~~affected~~ facility." Thus, the date for commencement of construction, where the contract for construction rather than actual physical changes to the site is used, applies separately to each of Chevron's contracts. The earlier contract date for the storage vessels cannot be used to "grandfather" the refining facilities as exempt from NSPS compliance. The date of the environmental impact study is irrelevant.

Because other information was unavailable to us, this affirmative applicability determination applies only to the "commencement of construction" issue, and does not speak to the process or design capacity requirements of 40 CFR Part 60.

/s/ Jean E. Vernet  
JEAN E. VERNET

MAY 3 1976

CERTIFIED MAIL—  
RETURN RECEIPT REQUESTED #789717

Mr. T. O. Taylor  
Technical Manager  
Industrial Chemical Division  
PPG Industries, Inc.  
P.O. Box 1000  
Lake Charles, Louisiana [Illegible]

Dear Mr. Taylor:

On February 26, 1975 Conoco Oil Company notified this office that, as fuel supplier to PPG Industries, Conoco would have to switch from supplying natural gas to fuel oil for PPG's fossil fuel fired steam generators at the Lake Charles, Louisiana plant. On March 21, 1975 a meeting was held in Dallas that was attended by representatives of PPG, Conoco, the Environmental Protection Agency, and a representative of the Louisiana Air Control Commission. At this meeting the effects of the fuel switch in regard to the applicability of the New Source Performance Standards were discussed. On January 19, 1976 we wrote you requesting information on the status of the fuel switch. In a letter dated February 2, 1976 you informed us that the Louisiana Air Control Commission approved PPG's fuel oil permit application on July 9, 1975.

Under the provisions of the Clean Air Act, as amended, 42 U.S.C. 1857 et seq., the Administrator of the Environmental Protection Agency has promulgated Standards of Performance for New Stationary Sources [40 CFR Part 60]. Among the new and modified stationary sources to which Standards of Performance apply are fossil fuel-fired steam generating units [40 CFR Part 60, Subpart D, a copy of which is enclosed].

Facilities covered by Standards of Performance are subject to notification and recordkeeping requirements [40 CFR 60.7, a copy of which is enclosed].

A fuel switch from natural gas to fuel oil is probably a modification within the meaning of 40 CFR 60.14 (a copy of which is enclosed) unless the exception of 40 CFR 60.14(e)(4) applies. It is necessary for you to provide us information that will demonstrate whether or not the fuel switch is a modification and whether or not you come within the scope of 40 CFR 60.14(e)(4). Accordingly, pursuant to the authority granted in Section 114 and subject to the sanctions of Section 113 of the Clean Air Act (copies of which are enclosed) you are hereby required to complete Enclosure 1 to this letter. The completed Enclosure 1 is required to be submitted within twenty (20) days from the receipt of this letter to the Environmental Protection Agency at the following address:

U.S. Environmental Protection Agency  
Region VI  
1600 Patterson Street  
Dallas, Texas 75201

Attn: Enforcement Division

Any change in the information so reported must be reported to the same office within five days after such change occurs. This continuing requirement to provide notification of change in the information covered by this letter remains in effect until expressly terminated in writing by this office.

In accordance with Section 114(c) of the Clean Air Act and the Freedom of Information Act, 5 U.S.C. Section 552, information provided to the Environmental Protection Agency in this report will be available to the public, except that upon a showing satisfactory to the Agency by any person that a specified portion (other than emission data), if made public, would divulge methods or processes entitled to protection as trade secrets of such person, the Agency will consider such information confidential in accordance with the purposes of 18 U.S.C. Section 1905. However, any such confidential information may be disclosed to other officers, employees, or authorized representative of the United States concerned with carrying out the Clean Air Act or when



relevant in any proceeding under the Clean Air Act. If you feel that you can justify confidential treatment for any of the information supplied, you should provide a fully detailed explanation for each specific item of information at the time that you respond to this letter. Whether or not you regard part of the information requested as confidential, you are required to furnish it in response to this letter.

Questions regarding your compliance with the New Source Performance Standards should be addressed to Mr. James Veach, Attorney, Enforcement Division, at (214) 749-2142.

Sincerely yours,

Original Signed By  
THOMAS P. HARRISON, II  
Director  
Enforcement Division (6AE)

#### Enclosures

1. Enclosure 1
2. 40 CFR 60.7
3. 40 CFR Part 60, Subpart D
4. 40 CFR 60.14
5. Sections 113 and 114 of the Clean Air Act

cc: Mr. James F. Coerver  
Technical Secretary  
Louisiana Air Control Commission  
P.O. Box 60630  
New Orleans, Louisiana 70160

bcc: Bill McNally, (6AEA)

6AEL: JVeach:ma:X2142:R1135:4/29-76

JV 4/29

6AEL JC 6AEA [Illegible]

Collings Doyle

*When info on increase in pollutants comes back we may still have to call/write whether company calculations/projects whether an increase will occur.*

bcc: George Stevens, DSSE

[italicized portions appears as handwritten notations in record]

#### Enclosure 1

#### Required Information to be Submitted

Provide the following information for each fossil fuel-fired steam generating unit of more than 250 million British thermal units per hour heat input, the construction or modification of which was commenced after August 17, 1971.

1. List each steam generating unit that has changed or will change from burning natural gas to burning fuel oil and the date of each change.

2. If any of the steam generating units listed in number 1, above, were designed prior to August 17, 1971, to accommodate the use of fuel oil, provide documentation of such designed use for each such unit.

3. List the changes that were or will be made to each steam generating unit that allows it to burn fuel oil, and the date such changes were or will be begun on each such unit.

4. Provide all available information and documentation on the change in emission of any pollutant from each unit as a result of the fuel switch from natural gas to fuel oil.



[PPG Emblem]

PPG INDUSTRIES, INC.  
Industrial Chemical Division  
P.O. Box 1000  
Lake Charles, La. 70601

T. G. TAYLOR  
*Technical Manager*

May 14, 1976  
Certified Mail—Return Receipt Requested

Mr. Thomas P. Harrison, II  
Director—Enforcement Division (6AE)  
U.S. Environmental Protection Agency  
Region VI  
1600 Patterson Street  
Dallas, TX 75201

Re: Enclosure I, Thomas P. Harrison to T. G. Taylor,  
May 3, 1976

Dear Mr. Harrison:

We believe that all answers and documentation to the four questions raised in your Enclosure I are found in PPG's application to the Louisiana Air Control Commission dated May 26, 1975, for fuel oil burning in our complex. A copy of this document was forwarded to you last year by the LACC. For your convenience, however, those sections containing answers to your Enclosure I questions are reproduced and included herein.

The fuel oil permit application covers two situations. The first situation is that we must convert some of our existing combustion equipment from gas to oil feed due to supply problems. Since all of the equipment to be converted was originally designed for fuel oil feed and in operation prior to 1971, the fuel switch is a modification within the meaning of 40 CFR 60.14. This conversion is now partially completed.

The second situation covered by our permit is the construction of a new power facility (to combust either gas

or oil. This new facility was designed and equipment was ordered in 1970. Numerous problems delayed the start of construction until late last year.

[handwritten and illegible marginal notes omitted]

The monitoring devices required of a new emission source are being incorporated into the design of this facility. Startup of this unit is still a year in the future; consequently, you have not directly received information on the unit.

Sincerely yours,

/s/ T. G. Taylor  
Technical Manager

edh

cc: J. F. Coerver  
R. J. Samelson/G. P. Cheney  
J. R. Farst  
J. E. Wyche  
C. A. Burns

Enclosure 1

#### Required Information to be Submitted

Provide the following information for each fossil fuel-fired steam generating unit of more than 250 million British thermal units per hour heat input, the construction or modification of which was commenced after August 17, 1971.

1. List each steam generating unit that has changed or will change from burning natural gas to burning fuel oil and the date of each change.

2. If any of the steam generating units listed in number 1, above, were designed prior to August 17, 1971, to accommodate the use of fuel oil, provide documentation of such designed use for each such unit.

3. List the changes that were or will be made to each steam generating unit that allows it to burn fuel oil, and the date such changes were or will be begun on each such unit.

4. Provide all available information and documentation on the change in emission of any pollutant from each unit as a result of the fuel switch from natural gas to fuel oil.

#### Reply to Enclosure 1

(1) Units 5, 6, 7, 8 and 9 at Powerhouse A, and Units 2 and 3 at Riverside Powerhouse will be modified to accept fuel oil as well as natural gas. Units 1 and 2 at Powerhouse C will be constructed to combust natural gas and/or fuel oil. This information is contained on pages 2 and 2A.

(2) All Powerhouse A and Riverside boilers were originally designed for either gas or fuel oil operation. Predicted performance data and certified construction drawings are presented in Appendix IV with Exhibits A-F.

Note: Powerhouse A boiler heat releases are less than 250 MM Btu/hr. each.

(3) The fuel oil system for all boilers is still under construction. Page 5 contains a brief description of the oil system; page 2A shows the chronology. Exhibit V explains the mode of operation of the new units. SK-7333 is a schematic of the oil system.

(4) The EIQ submitted in association with the permit application and dated 3/17/75 presents the new emission data predicted from each boiler as a result of fuel oil combustion. A page 6 from the EIQ is presented for each unit.

Show ownership and use of adjoining property on map section or list below.

List any residential areas near the plant or establishment and give distance from the plant or establishment:

See Exhibit I Plant Layout/Land Allotment

Location of Power Plant Stacks

Fuel Oil Permit

PPG Drawing 32A-6022-F.O.

### 3. LOUISIANA AIR CONTROL COMMISSION EMISSION INVENTORY QUESTIONNAIRE.

A completed Emission Inventory Questionnaire (copy attached) is required. If a new 6 page questionnaire for this location has been previously submitted, give date of submission February 1975. A completed "revised" Emission Inventory Questionnaire must also be submitted with this application. The Emission Inventory Questionnaire must be completed showing the entire emissions of the facility after modifications and/or additions, with max. concentration calculations under worst ambient air conditions.

Estimated starting date of construction: Power Plts. A, B, C (See Pg. 2A)

Estimated date operation will begin: See Page 2A.

Old Facility: Power Plts. A & B Operating

Addition: No

New Facility: Power Plt. C

Addition: Yes

"Give a brief description of proposed action and attach such information as flow diagrams, schematic diagrams, drawings, etc. needed to convey an understanding of the processes involved in the plant or establishment."

Due to the notice of curtailment of our natural gas contract by one of our suppliers, PPG is required to use fuel oil for a major percentage of their fuel needs. Seven boilers now in operation using natural gas will be converted to burn fuel oil. The chlorine expansion, Permit 290, has two new boilers that will burn fuel oil and/or natural gas. Therefore, nine boilers will be converted for the burning of fuel oil. They are as follows: (1) *Power Plt. A*—Nos. 9, 8, 7, 6, 5. No. 5 boiler will be a spare for outages of boilers #9 through 6. Stack numbers are the same as boiler numbers. (2) *Power Plt. B* (Riverside)—Nos. 3 and 2. The No. 3 boiler stack is being raised to the same height as No. 2, 150 ft. Stack num-

bers are 12 and 11, respectively. (3) *Power Plt. C*—Nos. 1 and 2 with stack Nos. 6-73 and 5-73, respectively. The schematic showing boiler arrangements is as follows: *Exh. II*—Routing of fuel oil fed to boilers; *Exh. III*—Plan View of Boilers *Plt. A*; *Exh. III-A*—*Plt. B*; *Exh. III-B*—*Plt. C*; *Exh. IV*—Boiler elevation and stack heights *Plant A*, Boilers 1 thru 9; *Exh. IV-A* and *IV-B*—Boilers 2 and 3; *Exh. IV-C*—Boilers 1 and 2.

Five on-the-line fuel oil tanks are being installed, four for No. 6 and one for blending low sulphur fuel oil with the No. 6 fuel oil to maintain ambient air at acceptable SO<sub>2</sub> environmental levels. The fuel oil will be burned at a nominal rate of 9,692 BPD.

Power Plants	Estimated Starting Date of Construction	Estimated Date Operation Will Begin
--------------	---	-------------------------------------

Power *Plt. A*

Boiler #9	December 1, 1975	January 26, 1976
Boiler #8	January 26, 1976	March 15, 1976
Boiler #7	March 15, 1976	May 3, 1976
Boiler #6	May 3, 1976	June 21, 1976
Boiler #5	June 21, 1976	August 9, 1976

#5 Boiler will be a spare for outages of Boilers #9 through #6.

Power *Plt. B*  
(*Riverside*)

Boiler #3	September 29, 1975	December 1, 1975
Boiler #2	December 1, 1975	February 2, 1976

Power *Plt. C*

Boiler #1	January 1, 1976	February 1, 1977
Boiler #2	July 1, 1977	August 1, 1978

List the air pollution abatement measures that will be utilized to control the emissions from the sources for the plant or establishment. If no facilities are contemplated, list the steps which will be taken to prevent the emission of sufficient quantities of pollutants to result in undesirable levels. Give the source and then the abatement method for each source. Please include information such

as drawings, manufacturer literature, specification, capacities and efficiencies needed for evaluation of such control equipment and techniques used in controlling each source. Please include date that each estimated date operation will begin. Any information about the method used for abating the source will facilitate the evaluation of the application.

The new burners and soot blowers to be installed in the designated boilers will incorporate the latest technology to consume the liquid fuels as cleanly and efficiently as possible. The system is designed for 9,692 BPD of fuel oil. The typical rate of burning will be lower, resulting in lower SO<sub>2</sub> emissions than indicated in Appendix I—Ambient Air—Max. Conc. of Pollutants with 1 Wt. % S Fuel Oil. Expected plan of boiler operations is given in Appendix II. Boiler sizes are shown as Appendix III as MM BTU/Hr.

In order to continuously meet the primary standards for SO<sub>2</sub>, the following will be done:

1. Monitor ground level SO<sub>2</sub> concentration as required by the LACC.
2. Extend the stack of our existing No. 3 boiler at *Riverside* from 100' to 150'.
3. Install storage capacity and equipment so that fuel oil blending can be accomplished to provide environmental acceptance of fuel oil during adverse SO<sub>2</sub> levels of 365 ug/m<sup>3</sup> in ambient air. Blending will be accomplished using a low sulphur fuel oil with the No. 6 oil.
4. Supplier's letter of intent of February 5, 1975, to furnish fuel oil that can be blended with 1 wt.% S fuel oil whenever monitors detect that an emergency SO<sub>2</sub> condition exists, is Exhibit V.
5. We plan to design foundations and structure of new boiler stack at *Power Plant C*—#1 and #2 so that they may be extended.

LACC-AFAOE-Rev. 1/20/73



## APPENDIX V

POWER PLANT C  
COMBINED FLUE GASES FROM GAS TURBINE  
AND WASTE HEAT BOILER BURNING  
GAS OR OIL

PPG Industries asks that the calculation of emissions rate from its two boilers at Power Plant C, now under construction, be done for normal operating conditions when determining compliance with EPA regulations. Following are the reasons for the request:

*Abstract*

PPG Industries is constructing a combined cycle power-steam generating plant at its Lake Charles, Louisiana, chemical complex. Under normal operation, the flue gas from a gas turbine generator exhausts directly into a waste heat boiler where additional fuel is fired. The flue gases from both units are inseparably mixed and emitted through a single stack to the atmosphere. Both units have heat releases greater than 250 MM BTU/hour. PPG is requesting that it be allowed to consider the total heat release from both units when determining the emissions rate from the stack to the atmosphere. PPG has acquired a permit from the Louisiana Air Control Commission to construct this plant; however, the permit is based on total gas firing, a requirement that can apparently no longer be met by our fuel suppliers.

*Equipment Definition*

PPG Industries is constructing a combined cycle power plant to furnish its Lake Charles, Louisiana, chemical complex with both electrical power and process steam. Predicted maximum output after project completion in 1979 will be the following:

149	megawatts electrical power
466,000	pounds/hour 400 psig steam
730,000	pounds/hour 175 psig steam

Equipment configuration will be two GE gas turbine generators in parallel, each discharging its hot turbine exhaust gases in its respective waste heat boiler. Additional fuel is supplied to the waste heat boilers to provide sufficient heat for steam generation to feed a backpressure turbogenerator. It is from this steam turbine that 175 and 400 pound process steam is obtained. No steam is condensed to produce electrical power. The gas turbines are designed to burn natural gas; the waste heat boilers can burn either gas or oil. The total heat input to one gas turbine plus one waste heat boiler is 1312.7 MM BTU/hour, of which 714.4 MM BTU/hour is supplied by the gas turbine.

*Operation*

Normal operation is described under Equipment Definition; however, each unit may operate individually at a sacrifice to overall economy. The on-stream factor of all units operating continuously is 95%. Thus, any operating configuration other than with both gas turbines, both waste heat boilers, and the waste heat generator on line is defined as an upset condition.

*Compliance with EPA Regulations*

Paragraphs 60.42, 60.43, and 60.44 of the Federal Register \* (Vol. 39, No. 116—Friday, June 14, 1974) set forth the current emission regulations (particulate, SO<sub>2</sub>, and NO<sub>x</sub>) being applied to boilers with heat released greater than 250 MM BTU/hour and burning fossil fuels. As previously described, our proposed combined cycle generating station fires natural gas in a gas turbine generator which is not normally vented to the atmosphere. The hot flue gases are used to supply part of the combustion air and heat input to the waste heat boiler. These gases, then, combine with the flue gases from the supplemental fuel fired in the waste heat boiler and are vented together in a single stack. In view of this situation, we are asking that the emission regulations be applied to the total heat input to the system—not just the supplemental fuel heat input at the waste heat boiler.

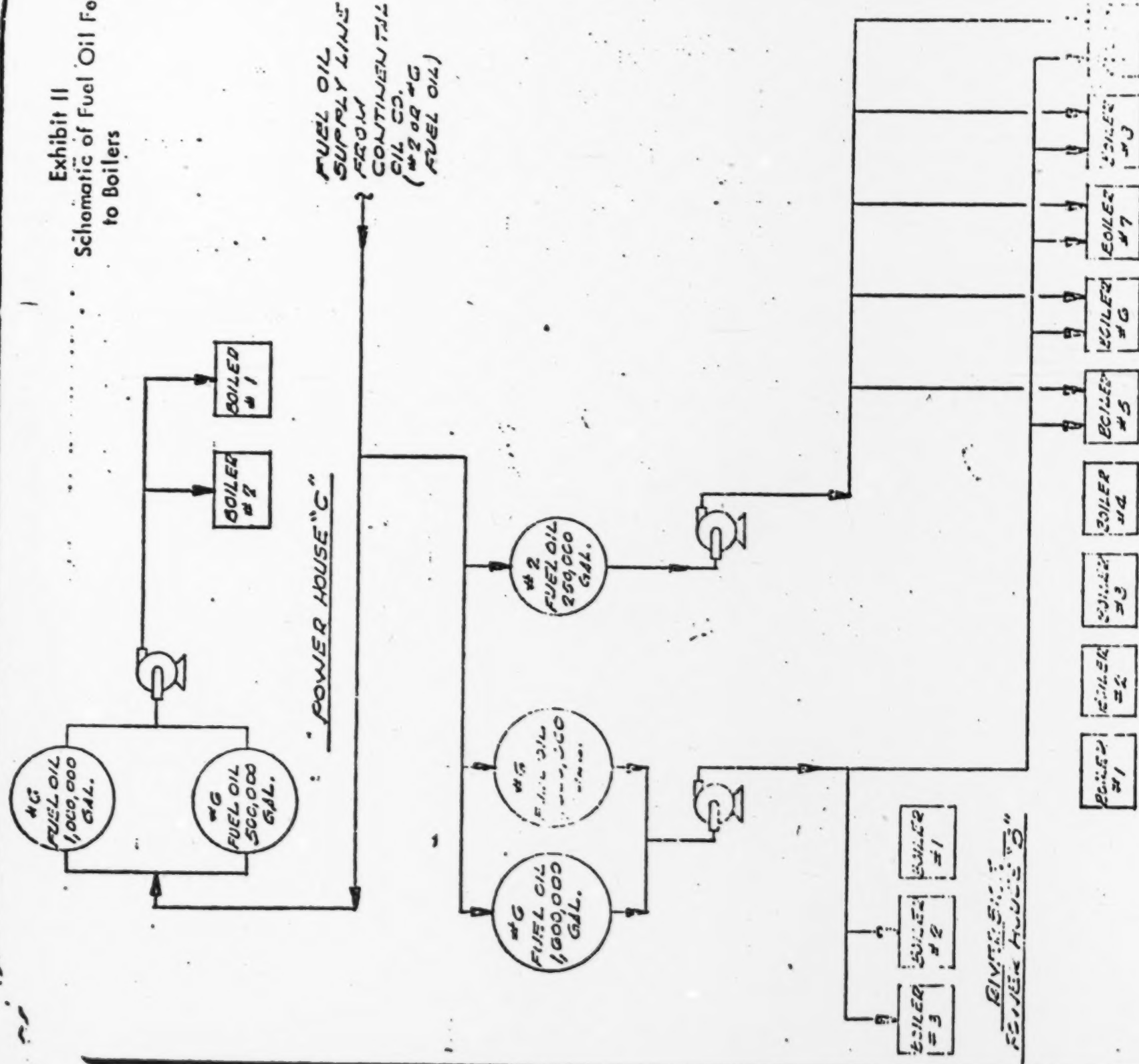
\* Attached.







Exhibit II  
Schematic of Fuel Oil Feed  
to Boilers



NOTE:  
#6 BOILER WILL BE A SPARE FOR  
OUTAGES OF BOILERS #6 THRU #9

INDUSTRIAL CHEMICAL DIVISION  
LAKE CHARLES  
LOUISIANA

TITLE FUEL OIL FACILITIES FLOW DIAGRAM	DRAWN BY J. J. J.	DATE JAN 1954	SCALE AS SHOWN	DWG. NO. SK-7353
	CHECKED BY J. J. J.	DATE JAN 1954	CHARGE G. J. J.	SHEET ____ OF ____
APPROVED BY J. J. J.		BILL OF MATERIAL		



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

SUBJECT: NSPS applicability to PPG      DATE: 5/25/71  
FROM: Jim Veatch

TO: Paul Fahrenthold

Please review the PPG documents to see if PPG has documented that its Powerhouse and Riverdale Powerhouse boilers were designed prior to August 17, 1971 to burn oil.

If PPG can document that Power Plant C was purchased prior to Aug. 17, 1971, it will be exempt. See if there is any thing in these papers on when C was purchased.

P



PDG Boiler Summary

Unit #	Size	Prod	Design
	MMBTU/hr		Capacity

PH "A":

5  
6  
7  
8  
9

*all units are 250 MMBTU/hr*

*all units are 250 MMBTU/hr*

< 250  
< 250  
< 250  
< 250  
< 250

document of  
10th of  
6-28-76

fuel oil / nat gas

PH "C"

1  
2

*all units are 250 MMBTU/hr*

*all units are 250 MMBTU/hr*

398.3  
598.3 - should be  
398.3!

RS ("B")

#1  
#2  
#3

420  
508.3  
342.5

used in 1967 - this is correct!  
#6 (butyl) oil / nat gas  
#2

*all units are 250 MMBTU/hr*

*all units are 250 MMBTU/hr*

RS or "B"

Units #1, #2 and #3 originally designed for  
fuel oil or nat gas.

1967-68-11019-3 RS unit #3 designed in 1967 - not installed!

1967-68-8019-1 RS unit #2 fuel oil lines revised for one unit -  
which unit?

1967-68-8022-1 RS unit #1 designed for fuel oil usage - which unit?  
are piping design typical for 3 units?

ENVIRONMENTAL PROTECTION AGENCY  
4.5.2.

JUN 02 1976

Mr. T. G. Taylor  
Technical Manager  
PPG Industries, Inc.  
P.O. Box 1000  
Lake Charles, Louisiana 70601

Dear Mr. Taylor:

Your letter and attachments of May 14, 1976 were received by the Enforcement Division on May 24, 1976. A thorough evaluation of the information contained in your response to our inquiry has been made. The conclusion reached by our staff is that your submission is insufficient in three areas to clearly demonstrate that the fuel conversion of the boilers in powerhouses A, B and C are exempt from NSPS.

On May 26, 1976 Mr. Paul Fahrenthold of my staff discussed the specific items needed to complete our evaluation with Mr. C. A. Burns of your staff. Mr. Burns requested that the items requested of him be confirmed by letter.

Therefore, we now require that you supply the following information, as an extension of our letter to you of May 3, 1976, which was issued under the authority of Section 114 of the Clean Air Act, as amended.

Information which you submitted to us alleges that boilers No. 5 thru 9 of Powerhouse A have a heat input of less than  $250 \times 10^6$  BTU/hr. The pages of the EIQ you submitted to the State of Louisiana wherein these boilers are listed as emission points specifies the value of  $219.6 \times 10^6$  BTU/hr for each unit. We require that you provide us a copy of a file document indicating the capacity of the units as guaranteed or certified by the boiler manufacturer.

*O.K.—Gol.*

*O.K.—may be reserved Gol.*

According to your letter of May 14, 1976, the two boilers which are part of the combined-cycle power plant of Powerhouse C were ordered in 1970, prior to the promulgation of NSPS for fossil fuel fired steam generators. Documentation from the equipment supplier or your purchasing department is required to establish the fuel firing capacity of the boilers and their exact purchase date.

Mr. Burns responded to our request as to the fuel used in Riverside (Powerhouse B) boiler No. 1 by stating that the unit would continue to be fired by natural gas. Based on the information you have submitted we have concluded that Riverside units No. 2 and 3 were designed to use oil as well as natural gas as fuel. The drawings, 6B-8019 and 6B-8088, which you submitted as evidence of your use of oil in these boilers are confusing in that they show a fuel oil system originally installed in 1943 and modified in 1950, but do not clearly label which boilers of the Riverside station are being fed by the fuel oil system. Please explain which boilers were/are being fed by the fuel oil system shown in the drawings, and confirm Mr. Burns' statement that Riverside Boiler No. 1 uses only natural gas as fuel.

O.K.—Gol.

At this time we feel that the supplemental information requested above will be adequate to allow a determination to be made as to the applicability of NSPS to the above boilers.

Should you feel that additional discussion will expedite a timely response to our request, please call Paul Fahrenheit of my staff at (214) 749-2142.

Yours very truly,

Original Signed By

THOMAS P. HARRISON, II  
Director, Enforcement Division  
Air Compliance Branch

[Routing and concurrence notation omitted in printing;  
italicized portions are handwritten marginal notes]

[PPG Emblem]

PPG INDUSTRIES, INC.  
Industrial Chemical Division  
P.O. Box 1000  
Lake Charles, La. 70601

June 28, 1976

[Received June 31, 1976]

4.5.2.

*m/Crocker For evaluation—John pls. refer to my letter to PPG for the quote needing clarification.*

Mr. Thomas P. Harrison, III, Director  
Enforcement Division  
Air Compliance Branch  
U.S. Environmental Protection Agency  
Region VI  
1600 Patterson  
Dallas, TX 75201

Dear Mr. Harrison:

The following explanation and attachments are forwarded as an extension of our May 14, 1976, letter. We believe this, in combination with our present application to the Louisiana Air Control Commission, will provide sufficient documentation to answer all the questions you have raised concerning our fuel oil conversion and power expansion project.

(a) Re: Heat release of Powerhouse A boilers:

Attachments A and B show the capacity and fuel consumption of the Powerhouse A boilers as a result of the last modification completed in 1955. The boilers are run continuously at 175 M#/Hr. steam rate and consume slightly less fuel than the predicted 231 MM BTU/Hr. on B.



## (b) Re: Power expansion:

Attachments C and D are the purchase orders to G.E. for the gas turbine generator and to Combustion Engineering for the waste heat boiler. The reason for the great disparity in dates of order is that the project was temporarily placed on hold in 1971 until long-term arrangements could be ironed out with one of our fuel suppliers. The waste heat boiler order was cancelled; however, the gas turbine order was not because it was a long-delivery item.

Attachment E is the cover letter of the equipment manual sent out to the general contractors bidding on the expansion on February 16, 1971.

Attachment F is the section of the bidding manual specifying the waste heat boiler and fuels.

Attachment G is the predicted performance of the waste heat boiler.

Attachment H is the predicted performance curve of the gas turbine purchased from G.E.

## (c) Re: Riverside Powerhouse:

The Riverside Powerhouse consists of three units, each installed at a different time. Drawing 6B-8088 shows the fuel oil installation pertaining to the first unit constructed in 1943. The boiler on this unit has 4 burners which are schematically shown on the drawing. In 1950, additional fuel oil equipment was added to the original system to accommodate installation of the No. 2 unit. The boiler for this unit has 6 burners, which are schematically shown on the drawing. In 1969, the No. 3 unit was installed. The boiler for this unit has 6 burners, which are schematically shown on drawing 6B-11019.

The fuel oil systems, depicted in the above 3 drawings are presently in the process of being modernized.

In our permit to the LACC, we asked for exemption of all three Riverside units under paragraph 60.14 subpara-

graph e, item 4 (CFR Vol. 39, No. 200—Tuesday, October 15, 1974) since they were all designed for oil and installed prior to 1971. At this time, we are not projecting the need to fire the No. 1 unit on oil and have so stated in our permit application. If, in the future, we find it necessary to fire the No. 1 unit on oil, at least some of the paperwork will have been done in order to expedite its operation.

Sincerely yours,

/s/ *T. G. Taylor*  
T. G. TAYLOR  
Technical Manager

TGT/jma

cc: J. C. Coerver  
R. J. Samelson/G. P. Cheney  
J. R. Farst  
J. E. Wyche  
C. AR. Burns

[Italicized portion is handwritten notation]



ALL QUOTATIONS AND SALES ARE SUBJECT TO THE  
CONDITIONS PRINTED ON THE BACK OF THIS PAGE

Established 1890

A. M. LOCKETT & COMPANY  
LIMITED

Contracting Mechanical Engineers  
Complete Steam Power & Pumping Plants  
New Orleans 7, La.

BRANCH OFFICES

HOUSTON

DALLAS

June 9, 1955

B&W Boiler Contracts F-414 and R-512

Mr. Russell Clark, c/o  
Columbia Southern Chemical Corp.  
P.O. Box 900  
Lake Charles  
Louisiana

Dear Mr. Clark:

This will confirm your telephone conversation with Frank Gault concerning the possible increase in capacity of your existing boilers to possibly 175,000 lbs. of steam per hour. While the Babcock & Wilcox Company would not wish to assume any contractual obligation on these old boilers, we are pleased to advise you as follows:

Based on circulation, the boilers should be able to obtain a capacity of 175,000 lbs. of steam per hour. The limiting factor is the capacity of the cyclone separators. The maximum capacity of the cyclones with the horizontal type scrubbers over them that are in your boilers is rated by us at 95000 lbs. of steam per hour each when you are operating at 620 psig. Unfortunately in the drum that you have we cannot put the newer type inclined scrubbers as there isn't enough room.

We would suggest that you attempt to obtain the 175,000 lbs. of steam per hour from your boilers. While doing this you could make carryover tests to determine how much carryover there will be. If you cannot obtain the quality of steam you need, it is possible for us to add four more cyclone separators in each drum; but we feel that before you invest any money in additional equipment you should try to see if you can get your 175,000 lbs. of steam per hour with satisfactory steam quality.

*This Was Done*

We are sending you a proposal on a duplicate unit for No. 9; and you will note in the proposal we are setting it up for 150,000 lbs. of steam per hour as the old ones are. Of course, the additional cyclones could be put in initially on the new unit at slight additional cost.

We are also checking into the air heater situation about which you spoke to our Mr. Gault.

Yours truly,

A. M. LOCKETT & COMPANY, LTD.  
/s/ *F. Robert Mendow*  
F. R. MENDOW  
Chief Engineer

FRM:mk

cc: FCGault—Lake Charles

[Italicized notation appears as handwritten  
notation in margin in record]

## THE BABCOCK &amp; WILCOX CO.

AND IS LOANED UP CONDITION THAT IT IS NOT TO BE REPRODUCED OR COPIED, IN WHOLE OR IN PART, OR USED FOR FUEL TO OTHERS, OR FOR ANY OTHER PURPOSE DETRIMENTAL TO THE INTERESTS OF THE BABCOCK & WILCOX CO. AND IS TO BE SO THE EQUIPMENT SPECIFIED HEREON IS PROTECTED BY PATENT OWNED OR CONTROLLED BY THE BABCOCK & WILCOX CO. AND PATENTS IS LIABLE TO PROSECUTION.

A FUEL AS FIRED		D		E PREDICTED PERFORMANCE		F	
SAMPLING ANALYSES		STEAM, ACTUAL, M LBS/HR		150		175	
KIND		TYPE OF FUEL		175		NATURAL GAS	
CLASS		RATE AND LOAD DURATION, HR		15		CONT.	
GROUP		EXCESS AIR LEAVING %		15		15	
MINE		BURNERS, NO. IN USE PER FURNACE		4		4	
SEAM		CONTINUOUS BLOWDOWN		17.5		17.5	
DISTRICT		FUEL A/C F		17.5		17.5	
COUNTY		FLUE GAS LEAVING		17.5		17.5	
STATE		AIR LEAVING A.M.		17.5		17.5	
SIZE		STEAM AT S.M. OUTLET		17.5		17.5	
GRINDABILITY		MIN. OPER. IN BOILER DRUM		17.5		17.5	
SURFACE MOIST., %		DROP, DRUM TO S.M. OUTLET		17.5		17.5	
DRUM MOISTURE		DROP THRU ECON		17.5		17.5	
VOL. MATTER		SUPERHEATED STEAM		17.5		17.5	
FIRED CARBON		FLUE GAS LEAVING BLR		17.5		17.5	
ASH		FLUE GAS LEAVING ECON		17.5		17.5	
TOTAL		FLUE GAS LEAVING A.M.		17.5		17.5	
REDUCING OXIDIZING		WATER ENTERING ECON		17.5		17.5	
INIT DEF		WATER ENTERING BLR		17.5		17.5	
SOFTENING		AIR ENTERING A.M.		17.5		17.5	
LIQUID		AIR LEAVING A.M.		17.5		17.5	
KIND		FURNACE		17.5		17.5	
GRAVITIES A.P.L.		ROLLER AND SUPERHEATER		17.5		17.5	
STEAM		ECONOMIC		17.5		17.5	
KIND		AIR HEATER		17.5		17.5	
SP GR REL TO AIR		DAMPERS		17.5		17.5	
FUEL		PLUES		17.5		17.5	
% BY		NET DRAFT LOSS		17.5		17.5	
ASH		BURNER AND WINDBOX		17.5		17.5	
S		DUCTS		17.5		17.5	
H <sub>2</sub>		AIR HEATER		17.5		17.5	
C <sub>5</sub> H <sub>12</sub>		NET RESISTANCE		17.5		17.5	
O <sub>2</sub>		DRY GAS		17.5		17.5	
CO <sub>2</sub>		H <sub>2</sub> AND H <sub>2</sub> O IN FUEL		17.5		17.5	
CO		MOISTURE IN AIR		17.5		17.5	
H <sub>2</sub> O		UNBURNED COMBUSTIBLE		17.5		17.5	
H <sub>2</sub>		RADIATION		17.5		17.5	
O <sub>2</sub>		UNACC FOR S. MFRS. MARG		17.5		17.5	
TOTAL		TOTAL HEAT LOSS		17.5		17.5	
BTU/LB		EFFICIENCY OF UNIT, %		17.5		17.5	
BTU/OU FT AT		MAX ALLOWABLE BOILER CONC. PPM		17.5		17.5	
60 F. 30 IN. WG		NO. IN USE PER FURNACE		17.5		17.5	
AIR TEMP TO PULV, F		TOTAL POWER, KW/HO/TON		17.5		17.5	
TOTAL		56 THRU NO. 200 U.S. SIEVE		17.5		17.5	
BTU/OU FT AT		75 THRU NO. 50 U.S. SIEVE		17.5		17.5	
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60 F. 30 IN. WG		MAX ALLOWABLE BOILER CONC. PPM		17.5		17.5	
AIR TEMP TO PULV, F		NO. IN USE PER FURNACE		17.5		17.5	
TOTAL		TOTAL POWER, KW/HO/TON		17.5		17.5	
BTU/LB		56 THRU NO. 200 U.S. SIEVE		17.5		17.5	
BTU/OU FT AT		75 THRU NO. 50 U.S. SIEVE		17.5		17.5	
60 F. 30 IN. WG		MAX ALLOWABLE BOILER CONC. PPM		17.5		17.5	
AIR TEMP TO PULV, F		NO. IN USE PER FURNACE		17.5		17.5	
TOTAL		TOTAL POWER, KW/HO/TON		17.5		17.5	
BTU/LB		56 THRU NO. 200 U.S. SIEVE		17.5		17.5	
BTU/OU FT AT		75 THRU NO. 50 U.S. SIEVE		17.5		17.5	
60 F. 30 IN. WG		MAX ALLOWABLE BOILER CONC. PPM		17.5		17.5	
AIR TEMP TO PULV, F		NO. IN USE PER FURNACE		17.5		17.5	
TOTAL		TOTAL POWER, KW/HO/TON		17.5		17.5	
BTU/LB		56 THRU NO. 200 U.S. SIEVE		17.5		17.5	
BTU/OU FT AT		75 THRU NO. 50 U.S. SIEVE		17.5		17.5	
60 F. 30 IN. WG		MAX ALLOWABLE BOILER CONC. PPM		17.5		17.5	
AIR TEMP TO PULV, F		NO. IN USE PER FURNACE		17.5		17.5	
TOTAL		TOTAL POWER, KW/HO/TON		17.5		17.5	
BTU/LB		56 THRU NO. 200 U.S. SIEVE		17.5		17.5	
BTU/OU FT AT		75 THRU NO. 50 U.S. SIEVE		17.5		17.5	
60 F. 30 IN. WG		MAX ALLOWABLE BOILER CONC. PPM		17.5		17.5	
AIR TEMP TO PULV, F		NO. IN					

CHEMICAL DIVISION  
ONE GATEWAY CENTER  
PITTSBURGH, PA 15222

INDUSTRIES

ORDER NO 267-001

Page 1 of 4

REQUESTED BY F. E. Landry	REQUISITION NO CE-001	CHANGE NUMBER G.O. 267	INQUIRY NO See Reply	DATE OF ORDER 11-11-70
CONFIRM NO VERBAL ORDER See Below			REQUIRED DELIVERY As Below	QUOTED DELIVERY As Below
BUYER D C Rhodes	QUOTATION NO / DATE See Below	NOTIFY F. E. Landry	SHIP VIA Best Way	
	Factory/Frt. Allow	TERMS See Below		

General Electric Company  
Industrial Sales  
Oliver Building  
Mellon Square  
Pittsburgh, PA 15222  
Atten: Mr. H.-E. Finke

ITEM	QUANTITY	DESCRIPTION	PRICE
2	2	General Electric heavy duty MS 7000 Series combustion gas turbine generator units, each unit consisting of the equipment listed on the G. E. Quotation No. 341-73254 dated October 30, 1970, and signed by Howard E. Finke (Rev. 11-12-70)	\$7,656,600.00 Lot
2		Technical direction of installation for the gas turbines as per quotation No. 4251-70007 dated 9-15-70 and signed by H. I. Cleveland	
3	1	General Electric steam turbine sized for the following conditions: Inlet conditions: 1250 psig - 950°F. Automatic Extraction - 216,000 #/hr. @ 600 psig. Automatic Extraction - 483,000 #/hr. @ 260 psig. Exhaust - 217,000 #/hr. @ 120 psig. Complete with hydrogen cooled 44,000 KVA, .85 power factor, 60 cycle, 3 phase, 3,600 RPM, 13,800 Volts, 158 short circuit ratio, synchronous generator, with coolers designed for 95°F and 125 psig cooling water. To be complete with accessories and other equipment listed on G. E. Quotation # 341-73254-B (Rev.) dated November 6, 1970, and signed by Howard E. Finke. This price covers technical supervision of installation	\$38,020.00/ea
		All prices above for both gas turbines, generators, steam turbines, etc. cover freight to accessible rail siding nearest customer's site.  Any omissions in this Purchase Order, but specified in the quotations of General Electric Company ("seller") referred to above, will apply.	\$1,786,805.00 Lot



CHEMICAL DIVISION  
ONE GATEWAY CEN.  
PITTSBURGH, PA. 15222



INDUSTRIES

ORDER NO 267-001

Page 2 of 4

REQUESTED BY	REQUISITION NO.	CHARGE NUMBER	INQUIRY NO.	DATE OF ORDER
CONFIRMING VERBAL ORDER			REQUIRED DELIVERY	QUOTED DELIVERY
BUYER	QUOTATION NO./DATE	F. O. B.	TERMS	SHIP VIA

ITEM	QUANTITY	DESCRIPTION	PRICE
		<p>PPG Industries, Inc. "purchaser" reserves the right to accept or reject a five year, 40,000 hour, maintenance contract on the gas turbines beginning on the commercial operating date at a cost of \$13.75 per fired hour per unit based on base load service, natural gas fuel and one start per 1000 hours or less. The \$13.75 per fired hour would be subject to change each year after the first year of the contract based on escalation of labor and/or materials from the date of commercial operation. This decision on the maintenance contract does not have to be made by the purchaser until the commercial operating date.</p> <p>The price would cover parts or repair, technical direction, monthly inspection and labor for all normal maintenance. This does not include breakdown coverage.</p> <p>The purchaser has the right to purchase a spare rotor for the gas turbines within twelve months after date of purchase order, for a price of \$590,000.</p> <p><u>Terms of Payment</u></p> <p>Eighty percent upon shipment from seller's factory, fifteen percent thirty days from date of shipment and five percent upon completion but not later than 180 days from date of shipment, provided that sellers shall have fulfilled all provisions of the Purchase Order as far as possible up to the time specified.</p> <p><u>Cancellation</u></p> <p>The purchaser shall have the right to terminate this Purchase Order by written notice to seller on or before May 1, 1971, if purchaser's Board of Directors have not theretofore authorized the construction by purchaser of a 1500 tons per day chlorine caustic soda plant facility at Lake Charles, Louisiana, and the requisite power generating facilities therefore, or if the plant facility thus authorized shall not require gas turbines;</p>	





CHEMICAL DIVISION  
ONE GATEWAY CENTER  
PITTSBURGH, PA 15222

INDUSTRIES

ORDER NO 267-001  
Page 3 of 4

REQUESTED BY	REQUISITION NO.	CHARGE NUMBER	INQUIRY NO.	DATE OF ORDER
CONFIRMING VERBAL ORDER				
BUYER	QUOTATION NO / DATE	F. O. B.	REQUIRED DELIVERY	QUOTED DELIVERY
		TERMS	SHIP VIA	

ITEM	QUANTITY	DESCRIPTION	PRICE
		<p>provided, however, that if purchaser shall so terminate this Purchase Order, purchaser shall pay seller a termination charge in the amount of \$21,000, upon payment of which sum all obligations of either party to the other hereunder shall terminate. The purchaser shall have the right to terminate this Purchase Order after May 1, 1971, but prior to June 1, 1971, under same terms, for an additional charge in the amount of \$10,000 for steam turbine and not to exceed \$150,000/Lot for two (2) gas turbines.</p> <p><u>Delivery</u></p> <p>Seller will ship the gas turbines by September, 1972. The steam turbine will be shipped 18 months after final steam output quantities are decided upon. Seller will provide purchaser with production schedule promptly and on a monthly basis thereafter.</p> <p><u>Transfer of Ownership</u></p> <p>Purchaser reserves the right to assign or transfer this Purchase Order in its entirety to a third party, without any additional cost or penalties whatsoever to purchaser or such third party assignee as a result of such assignment; provided such third party assignee shall undertake to construct and own the power generating facilities requisite to purchaser's said chlorine-caustic soda plant facility.</p> <p><u>Performance and Material Warranty</u></p> <p>The seller has the obligation to make at its own expense such alterations and additions or replacements as required to meet specifications for a period of one year after start-up date.</p>	



CHEMICAL DIVISION  
ONE GATEWAY CENTE  
PITTSBURGH, PA. 15222

INDUSTRIES

ORDER NO 267-001

Page 4 of 4

REQUESTED BY	REQUISITION NO.	CHARGE NUMBER	INQUIRY NO	DATE OF ORDER
CONFIRMING VERBAL ORDER		NOTIFY	REQUIRED DELIVERY	QUOTED DELIVERY
BUYER	QUOTATION NO./DATE	P. O. #	TERMS	SHIP VIA

ITEM	QUANTITY	DESCRIPTION	PRICE
<u>Guarantee</u>			
The seller will guarantee materials or equipment and workmanship to be free of defects for a period of one year from start-up or 18 months after delivery whichever comes first. Any repairs, alterations, or replacements found to be necessary shall be made at no cost whatsoever to purchaser. Each such repair, modification, or replacement shall carry some warranty commencing on the date of the installation as the original. If the seller does not remedy and/or replace the work to comply with the foregoing requirements within a reasonable time after written notice, the purchaser may remedy and/or replace it at seller's expense.			
Seller will furnish as soon as possible:			
<u>Copies</u>		<u>Title</u>	
7		Certified dimension prints	
7		Performance curves	
7		Installation, operation and maintenance instructions	
7		Parts list and assembly drawings including bearings	
		Identification by Bearing Mfg. name and symbol or number, etc.	
7		Recommended spare parts list with prices	
7		Lubrication manuals	
7		Wiring diagrams	
7		Any other data necessary to install, maintain, and operate the above equipment	
(One (1) reproducible of each may be furnished in lieu of copies as shown)			
Confirming verbal order of November 11, 1970, to: J. J. Broussard, H. E. Finke, Don Govdon, Jack Hull			
Approved: <i>L. J. Wilson</i> Nov. 11, 1970			

**Ford, Racon & Davis Construction Co., Inc.**  
Acting As Agent For PPG Industries, Inc., Industrial Chemical Division

PURCHASE DEPT. FILE COP

D

P.O. BOX 1762 - 3901 JACKSON STREET  
MONROE, LOUISIANA 71201

TO

Combustion Engineering Inc.  
505 John Hancock Building  
1055 St. Charles Avenue  
New Orleans, LA 70130

SHIP TO PPG INDUSTRIES, INC., INDUSTRIAL CHEMICAL DIVISION SHIP VIA  
Columbia Southern Road

6 Lake Charles, Louisiana 70601

F.O.B.

Jobsite

TERMS:

Per Contract

PURCHASE ORDER

No. 1884 A 136013

ABOVE NUMBER MUST APPEAR ON ALL INVOICES, PACKAGES, SHIPPING PAPERS AND CORRESPONDENCE.

REQ'N NO. C1884/3100-1E

DATE October 14, 1974

THIS ORDER CONSISTS OF 3 PAGES

Your Option

INVOICE INSTRUCTIONS  
ARE INDICATED  
IN ATTACHMENT "A"

Inquiry No.

M-472-2

Notify

J. E. Gaines

Charge No.

1-3180.208

Quantity	Unit	Description	Unit Price	Total Price
1	Lot	<p><b>P. P. G. C-1884-D-1</b></p> <p>The following shall be in accordance with Ford, Racon &amp; Davis Construction Corp. Specification M472-2 in your possession furnished with our Inquiry M-472-2 dated 8/31/73 and as technically described in C.E., Inc. Quotation No. SWS-74412 dated September 25, and October 10, 1974 and Proposal #37773. Confirms verbal placement by Mr. Fred Westrom on October 14, 1974.</p> <p><b>PURCHASE ORDER FOR COMMITMENT ONLY. CONTRACT TO GOVERN IN ALL RESPECTS.</b></p> <p>Furnish Materials, labor and equipment and perform the work for the Construction Installation and Completion of and shall Construct, Install and Complete Waste Heat System Generator and accessories complete with Safety System as per Contract Agreement dated, October 14, 1974.</p> <p>(Continued on page 2)</p>	Lot	\$5,177,911

136013

pg 11/10 CHB

N C

13

**IMPORTANT**

Bills of Lading must properly and completely describe shipment. Materials furnished shall show the total number of pieces. If this is not done, we are not responsible for losses through theft or damage. Our count will be accepted as final and conclusive on all shipments not accompanied by packing slip.

Ford, Racon & Davis Construction Corporation  
Acting As Agent For PPG Industries, Inc., Industrial Chemical Division

(Authorized Signat



## Ford, McDon &amp; Davis Construction Corporation

Acting As Agent For PPG Industries, Inc.,  
Industrial Chemical Division

PURCHASE DEPT. FILE CO

MLA-SP-9-74

TO: Combustion Engineering, Inc.

Page 2P.O. No. 1884 A 136013Req'n. No. C1684/3100-18Date October 14, 1974

THIS IS TO BE CONSIDERED A PART OF THE ABOVE NUMBERED ORDER AND TO BE GOVERNED IN ALL RESPECTS BY THE TERMS AND CONDITIONS CONTAINED ON THE FIRST PAGE OF THIS ORDER.

Quantity	Unit	Description	Unit Price	Total Price
		<p>1. All technical correspondence related to this order is to be addressed as follows:</p> <p>Combustion Engineering Inc. 1000 Prospect Hill Road Windsor, CT 06095 Attn: Project Manager</p> <p>2. All correspondence relative to the commercial aspects of this order is to be addressed as follows:</p> <p>Combustion Engineering Inc. 3334 Richmond Avenue Houston, TX 77006 Attn: Southwestern Regional Sales Mgr.</p> <p>Escalation: See Page 2-3 of Contract Agreement.</p> <p>Delivery: Combustion Engineering agrees to furnish drawings and make delivery of equipment to the following dates, based upon the date of contract award being October 14, 1974.</p> <p>Boiler Loading Drawings Including Economizer Section No Later than December 27, 1974</p> <p>Equipment Summary Sheet No Later than February 14, 1975</p> <p>Boiler and Auxiliary Equipment Arrangement, First Issue No Later than February 17, 1975</p> <p>Control Block Diagram and Legend No later than February 17, 1975</p> <p>Proposed Platform Arrangement No later than March 14, 1975</p> <p>Console and Cabinet Drawings No Later than April 14, 1975</p> <p>Column Loads No later than May 7, 1975</p>		

**JFord, Son & Davis Construction Co., Inc.**  
 Acting As Agent For PPG Industries, Inc.,  
 Industrial Chemical Division

PURCHASE DEPT. FILE CC  
**D**

TO: Combustion Engineering, Inc.

Page 3

P. O. No. 1884 A 136013

Req'n. No. CL384/3100-18

Date October 14, 1974

THIS IS TO BE CONSIDERED A PART OF THE ABOVE NUMBERED ORDER AND TO BE GOVERNED IN ALL RESPECTS BY THE TERMS AND CONDITIONS CONTAINED ON THE FIRST PAGE OF THIS ORDER.

Quantity	Unit	Description	Unit Price	Total Price
		Boiler and Auxiliary Equipment Arrangement - Final Issue	No Later than May 5, 1975	
		Elementary Wiring Diagrams	No Later than July 14, 1975	
		External Connection Diagrams which completes All Drawings	No Later than July 28, 1975	
		Initial Shipment - Drums, Boiler Tubes and Water Wall Panels Necessary to Begin Erection	No Later than December 12, 1975	
		Delivery to all Contract Equipment and Unit Ready for Boil-Out	No Later than November 19, 1976	
		Completion of all Erection Required Under this Contract	No Later than December 19, 1976	
		"Item 9 of Conditions of Purchase on the reverse side of this Purchase Order is deleted and is replaced by New Item 9 as shown on the enclosed Attachment "B".		

LAKE CHARLES PLANT  
PPG INDUSTRIES, INC.

## INSTRUCTIONS TO BIDDERS

RE: Specification K-2365  
Construction of New Power Plant  
At Lake Charles, Louisiana  
February 16, 1971

## 1. DUE DATE

Bidder shall submit his proposal as soon as possible but not later than April 2, 1971.

## 2. PROPOSAL

Bidder's initial proposal shall consist of the accompanying Proposal Prices and Proposal Data Forms, properly filled out. Ten (10) extra copies of these forms are enclosed for Bidder's use.

## 3. PRICE INFORMATION

The main price shall appear only where called for in the Proposal Prices and shall not appear elsewhere in the proposal. Any alternate prices shall be given on a separate price page and shall not be included with Bidder's technical or other nonprice data.

## 4. BID DOCUMENTS

A. The following are attached hereto and comprise the Bid Documents:

- a. Specification K-2365, including all drawings, standards and supplements referenced therein.
- b. Exhibit A—General Terms and Conditions.
- c. Specimen Contract Agreement.

B. Bidder shall notify PPG Industries immediately of any apparent omissions or conflicts noted in



the Bid Documents, and which affect any prices. If any conflict appears between job specifications and standard specifications, the job specifications shall apply.

- C. Any contract or purchase order resulting from these Bid Documents will incorporate the terms and provisions of said documents. It will be assumed that Bidder agrees to the provisions of said documents, unless exceptions are specifically and clearly listed in his bid. All such exceptions must be listed together and specifically identified as *Exceptions*. Bidder's printed terms and conditions are *not* considered specific exceptions.

## 5. INTENT OF CONTRACT DOCUMENTS

- A. The intent of the Specifications is to provide general conceptual guidance to establish operational requirements or standards. The Contractor is expected to develop, from engineering data and economic studies, the plans and specifications for, and construct a modern, efficient power plant consistent with the requirements established in the Contract Documents.
- B. It is the intent that Bidder's proposal shall be based on furnishing all domestic materials. Local or Louisiana suppliers should be used where competitive. If Bidder wishes to offer any materials or equipment of foreign manufacture, he shall designate these as such and list the savings to PPG Industries in each such category.

## 6. EXAMINATION OF SITE

- A. Contractor shall have visited the job site during Bid Period to familiarize himself with conditions under which the WORK is required to be done.

- B. Contractor shall carefully examine the site of WORK and the adjacent premises, and shall conduct the necessary investigations to inform himself thoroughly as to the facilities for handling the equipment at the site and difficulties involved in the completion of all work
- C. Contractor's plea of ignorance of existing or foreseeable conditions which will create difficulties or hindrances in execution of WORK is not acceptable as excuse for any failure on part of Contractor to fulfill in every detail all requirements of Specification and/or drawings. Furthermore, Contractor's plea of ignorance not acceptable as basis for any claim whatsoever for additional or extra compensation.
- D. Bidders are requested to attend a prebid conference and tour of the project site. Please call Mr. F. E. Landry or Mr. W. Stagg at PPG Industries no later than March 5 at area code 318 Phone 882-1200 for further information regarding the time and meeting place.

## 7. ADDENDA

Addenda to the Contract Documents may be issued prior to the date of opening of the bids to clarify the documents or to reflect modifications in the design or Contract terms. Each addendum issued by PPG Industries will be distributed to each person or organization to whom a set of the Contract Documents has been issued. The recipient will acknowledge receipt of each addendum by signing and returning the receipt form distributed with the addendum. All addenda issued by PPG become a part of the Contract Documents.

## 8. LICENSING OF CONTRACTORS

Bidders are advised that Act 233 of 1956 of the State of Louisiana requires that all Contractors and Subcontractors on any contract amounting to \$30,-

000 or more, must be licensed under said Act before performing any work thereon, and must comply with the terms and provisions of said Act. The Contract covering the work hereunder will contain a requirement to this effect and that any such licensing costs shall be borne by Contractor.

#### 9. PROPOSAL DISTRIBUTION

Proposal must be made out in septuplicate and sent to:

PPG Industries, Inc.  
One Gateway Center  
Pittsburgh, Pa. 15222  
Attention: Mr. D. C. Rhodes  
Purchasing Manager, Central Engineering  
1209 Allegheny Towers

The envelope, addressed as below, must be sealed and identified as follows:

PROPOSAL—CONFIDENTIAL  
LAKE CHARLES PLANT  
Specification K-2365  
Construction for 1973 Power Expansion at  
Lake Charles, Louisiana

#### 10. QUESTIONS DURING BID PERIOD

All questions should be directed to Mr. F. E. Landry or Mr. W. Stagg at PPG Industries in Lake Charles, Louisiana. Area Code is 318, Phone 882-1200. Post Office Box Number is 1000.

(b) Maximum net air and gas resistance through all parts of the steam generating unit.....

16 in. H<sub>2</sub>O for natural gas and hydrogen fuel at 675,000 lbs steam per hour.

(8) Maximum heat release in furnace (heat liberated by fuel).....

33,000 Btu/cu ft/hr for waterwall furnaces (for natural gas fuel "A") and in accordance with ABMA limitations and good design practice

(9) Maximum carry-over in steam from boiler shall not exceed 1 ppm at maximum capacity.

(10) Steam temperature shall be uncontrolled except by desuperheater which shall limit steam temperature to 955°F. The equipment shall include a full capacity desuperheater station. Supply water for desuperheater sprays shall be taken from the boiler feed pump discharge line. Desuperheater equipment shall be arranged for easy accessibility and maintenance.

#### b. Fuel Analysis:

- (1) The steam generating unit shall be designed to perform in accordance with the guarantee when burning gas turbine exhaust gas and natural gas, fuel "A": as listed below and 50% hydrogen as specified:
- (2) Gas turbine exhaust gas analysis is as follows:

#### Exhaust Gas Flow

1,789,000 lb/hr at 970°F at NEMA conditions.

(3) The natural gases normally used will have analysis as listed below:

- (1) Fuel A - Corroco, CSCC Meter Run.
- (2) Fuel B - Texaco, Big Lake and State East Hachberry Fields, Paradise Station.

#### Gas Analysis, Percent Volume

	Fuel A	Fuel B
Carbon Dioxide	0.58	0.60
Nitrogen	0.27	0.38
Methane	95.61	94.87
Ethane	3.33	2.84
Propane	0.17	0.83
Isobutane	0.02	0.17
N-Butane	0.02	0.15
Isopentane	-	0.06
N-Pentane	-	0.03
Hexane	-	0.02

3-4



Gas Analysis, Percent Volume, Cont.

Heptane  $C_7H_{16}$

Label A

Fuel B

0.05

Total

100.00

Heat Content

1013 Btu

1055 Btu

NOTE: Normally Fuel A will be bone dry - occasionally per cu ft  
wet. Fuel B will have a maximum of 10 pounds of sat. at 15.025  
moisture per million cubic feet. 15.025 psia and 60°F.  
and 60°F.

\*\*\* (See Below):

C. Guaranteed Performance:

a. The following items of performance shall be guaranteed based on use of  
gas turbine exhaust in combination with natural gas supplement and 50%  
 $H_2$  and a feedwater temperature of 228°F:

- (1) Continuous superheater steam output capacity..... 675,000 lb/hr
  - (2) Uncorrected exit gas temperatures from the boiler..... 275°F
  - (3) Gas and air resistance through complete unit..... 16 in.  $H_2O$
  - (4) Total pressure drop from economizer inlet to superheater outlet..... 150 psig
  - (5) Superheater steam temperature..... 555°F plus or minus 10°F
- b. Performance data shall be based on ambient air temperature of 100°F but this temperature may vary between 20°F and 100°F.
- c. Each steam generating unit when operating on natural gas and 50%  $H_2$  fuel alone, with all burners in service, shall have a capacity of 675,000#/hr. based on a minimum of 10% excess air at the burners and the temperature of air entering the windbox of 100°F.

D. General Design and Construction:

The steam generating units shall be in accordance with the manufacturer's standard design insofar as meets the intent of these specifications and without sacrificing any performance, efficiency, and operational reliability. The following requirements take precedence over any standard design and construction not equal thereto:

a. Code Requirements: The equipment, and all piping and appurtenances furnished therewith, shall be designed, constructed, tested, and code stamped in strict accordance with the applicable requirements of the ASME Boiler and Pressure Vessel Code, Section I - Power Boilers, and shall also comply fully with other state and local codes that may govern.

Certificates: Contractor shall furnish ASME data reports of shop and/or field inspection from the Contractor's Steam Boiler Inspection and Insurance Service.

\*\*\* See Page 3-5B for expected gas turbine performance based upon using the above fuels at various temperatures and per cents relative humidity.

△ REVISED VERBALLY 3/5/75  
BY AMERSON COMPANY

Aug 3/5/75

(COPY ATTACHED TO EXHAUST  
MEMO 3/5/75 TO H. LA MONTE)

# 1. WASTE HEAT STEAM GENERATOR DATA, Cont.

## H. Performance Data: Cont.

i. Gas temperature (based on  
above quantities):

(1) Entering superheater...°F	2,115	2,415
(2) Leaving superheater...°F	1,415	1,835
(3) Entering economizer...°F	680	750
(4) Leaving economizer...°F	300	250

△

j. Percent CO<sub>2</sub> at boiler outlet ..(%) ~~11.4~~ 8.38

k. Percent CO at boiler outlet....(%) 0

l. Natural gas fuel "A".....(Sft<sup>3</sup>/hr) 601,450 974,890

m. Efficiency steam generating unit.  
boiler, superheater, economizer  
and furnace.....(%)

85.15

n. Gas resistance (in. water):

(1) Furnace, boiler, superheater and economizer.....	6.75	7.05
(2) Ducts, fan and stack.....	2.50	0.50
(3) Total.....	<del>9.25</del> 9.75	<del>7.50</del> 7.55

△  
△  
△

o. Air resistance (in. water):

(1) Ducts.....	—	.50
(2) Burner and burner box.....	6.00	6.00
(3) Total.....	6.00	6.50

p. Total gas and air resistance  
through ducts, burners, etc.,  
.....(in. water)

~~15.25~~  
15.75 14.05

△

q. Steam pressure drop from drum  
to superheater outlet....(psi)

120 120

THIS CURVE TAKES INTO ACCOUNT NO. 2  
IN INLET - 3 EXHAUST SYSTEMS H  
Base  
G 7021 B

THIS DECREASES THESE OUTPUTS BY 1%

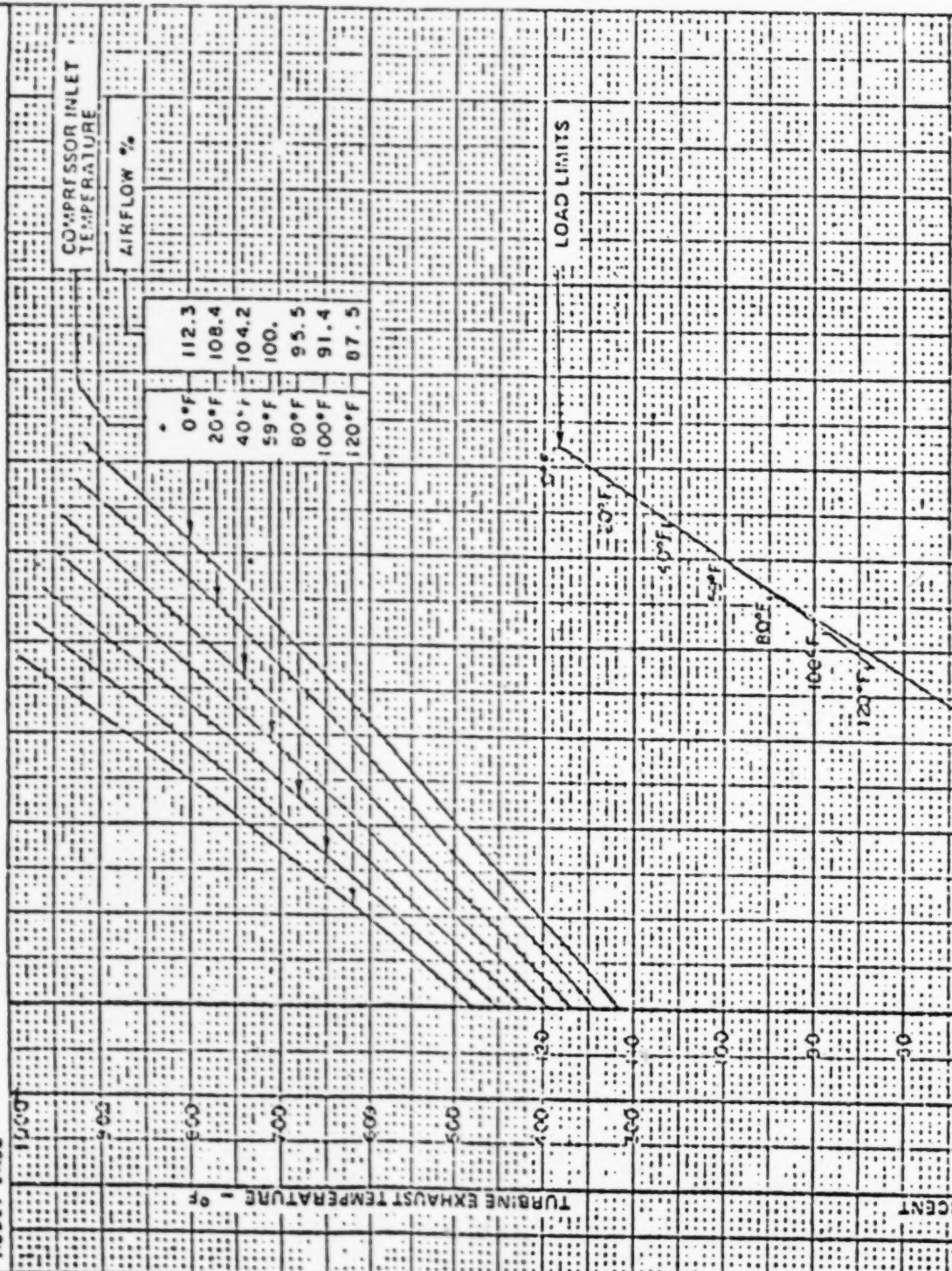
GENERAL ELECTRIC MODEL G7821; 61,300 KW GAS TURBINE  
ESTIMATED PERFORMANCE  
COMPRESSOR INLET TEMPERATURE 59 OF BAROMETRIC PRESSURE 14.7 PSIA

FUEL		NATURAL GAS - DISTILLATE OIL		HEAVY OILS	
DESIGN OUTPUT	DESIGN HEAT RATE (Btu/kWh)	DESIGN FUEL CONSUMPTION (lb/hr)	DESIGN AIR FLOW (lb/hr)	DESIGN HEAT RATE (Btu/kWh)	DESIGN FUEL CONSUMPTION (lb/hr)
61,300	10,830	663.5 x 10 <sup>6</sup>	1,905,000	11,000	657.7 x 10 <sup>6</sup>
61,300	10,960	657.7 x 10 <sup>6</sup>	1,905,000	11,000	657.7 x 10 <sup>6</sup>

DESIGN AIR FLOW 1,905,000 LBS/HR ← 59°  
DESIGN SHAFT SPEED 3,600 RPM

MODE: BASE

BY: R.M. GRAY  
DATE: 1-15-74  
REV:



- NOTES:
1. ALTITUDE CORRECTION ON CURVE 415HA062.
  2. EFFECT OF COMPRESSOR INLET TEMPERATURE ON MAXIMUM OUTPUT, AIRFLOW AND HEAT RATE ON CURVE 435HA016.
  3. % EFFECT OF PRESSURE DROPS ON OUTPUT HEAT RATE  
4" H<sub>2</sub>O INLET -1.6  
4" H<sub>2</sub>O EXHAUST -0.6
  4. FOR EACH 4" H<sub>2</sub>O TOTAL PRESSURE DROP INCREASE EXHAUST TEMPERATURE BY 3°F.

GENERATOR OUTPUT - PERCENT	
100	436 HB C45



Oct. 5, 1976

NSPS

CERTIFIED MAIL—RETURN RECEIPT REQUESTED #819271

Mr. T. G. Taylor  
Technical Manager  
PPG Industries, Inc.  
P. O. Box 1000  
Lake Charles, Louisiana 70601

*entered CDS 10-6-76*  
*GOB*

Dear Mr. Taylor:

Your letter and attachments of June 28, 1976 have been received and reviewed. Based on the information in that letter and your earlier submittal of May 14, 1976, we have determined that the Standards of Performance for New Stationary Sources [40 C.F.R. Part 60] apply only to the two waste heat steam generators of Powerhouse C located at the Lake Charles, Louisiana plant.

The applicability of the New Source Performance Standards (NSPS) is determined solely by the facts applicable to the specific facilities for which NSPS regulations have been issued. It is not considered relevant for NSPS purposes that the gas turbines for Powerhouse C were ordered in 1970. The purchase order you submitted on the waste heat steam generator showed that the unit was ordered on October 14, 1974. Because the contractual obligation to construct the steam generators was after the date of the proposed regulations for fossil fuel fired steam generators, August 17, 1971, the waste heat steam generators numbered 1 and 2 of Powerhouse C are subject to the provisions of the Standards of Performance for Fossil Fuel Fired Steam Generators, 40 C.F.R. Part 60, Subpart D (a copy of which is enclosed).

The two waste heat steam generators are subject to the notification and recordkeeping requirements of 40 C.F.R. 60.7 and the performance tests requirements of 40 C.F.R. 60.8 (copies of which are enclosed).

If you have any questions concerning this matter, you may contact Mr. Gary Bernath of my staff by letter or by telephone at (214) 749-7675.

Sincerely yours,

ORIGINAL SIGNED BY

O. W. Lively  
Acting Director  
Enforcement Division (6AE)

Enclosure a/s

cc: Mr. James Coerver  
Technical Secretary  
Louisiana Air Control  
Commission  
P. O. Box 60603  
New Orleans, Louisiana 70160

bcc: DSSE, Washington, D. C.

*JV*

6AEL.JVeach:maX2142:9-30-76'

<i>JC</i>	<i>JF</i>	<i>GOB</i>	<i>JD</i>
6AEL	6AEA	6AEA	6AEA
Collins	Bernath	Fahrenthold	Doyle
10/1/76	10/1/76	10/1/76	10/4/76

[Italicized material appears as handwritten notations in record]

[PPG Emblem]  
INDUSTRIES

0520 00004  
(318) 882-1200  
FTS 687-4181

PPG Industries, Inc. Industrial Chemical Division  
P. O. Box 1000 Lake Charles, La. 70601

T.C. TAYLOR  
Technical Manager

November 12, 1976

Mr. O. W. Lively, Acting Director  
Enforcement Division  
U. S. Environmental Protection Agency  
First International Building  
1201 Elm Street  
Dallas, Texas 75270

Dear Mr. Lively:

We had hoped to discuss with you in person some of the points raised in your letter dated October 5, 1976. Since this meeting has been postponed, we respectfully request you to reconsider the matter of the two waste heat steam generators of Powerhouse C for the reasons given below. If you agree, a meeting may not be necessary.

We contend that the gas turbine purchased in 1970 is relevant with respect to the waste heat boilers. Actually, this purchase was part of a commitment, including design and engineering, to a total power/steam generation package for our new chlor-alkali production facilities.

Unlike commercial power plant installations, which produce only electric power, Powerhouse C had to be designed to satisfy the power and steam requirements of the chemical complex it would serve. A reliable source of both steam and power is essential to chlorine plants where electrolysis of brine and concentration of caustic

by evaporators are major process steps. Due to the variable requirements for both power and steam within the process units, flexibility was a key ingredient in the design of the new powerhouse. PPG selected as the most efficient method of satisfying the required power/steam balance a combined-cycle system consisting of two gas turbines exhausting into two supplementally-fired waste heat boilers, the steam from which would be used to drive one turbogenerator, which, in turn, furnishes steam for the caustic evaporators and other process steam users. (See Sargent & Lundy Dwg. M-105, dated 1-26-71, attached.)

On November 11, 1970, PPG issued the attached purchase order (267-001) to General Electric Company for the two gas turbines and turbogenerator. Item 3, the turbogenerator, would be completely useless without the steam generators (waste heat boilers) that were subsequently purchased. The turbines and boilers will operate as one unit and each was designed in conjunction with the other. The fact that the waste heat boilers were purchased separately and at a different time was dictated by the long delivery time of the turbines and generator and by the need for efficient utilization of capital.

The purchase of the gas turbines and turbogenerator in 1970 represents a commitment of \$9.4 million, covering two-thirds of the equipment purchased in the combined-cycle power plant. Thus, we contend that, with the design engineering and substantiation as evidenced by the above-stated purchase order, all committed prior to August 17, 1971, for the construction of a combined-cycle plant, PPG "commenced" a continuous program of construction which excepts Powerhouse C from Part 60, New Stationary Sources Regulation.

If you have further questions, we believe that a conference in person would best expedite this serious misunderstanding. Please direct your inquiries to me. Thank you for your courtesies and prompt attention to this matter.

Sincerely,

*T. G. Taylor*  
T. G. Taylor

edh

Attachments

cc: G. P. Cheney  
J. F. Coerver

[Italicized material appears as handwritten notations in record]



[PPG Emblem]  
INDUSTRIES

One Gateway Center  
Pittsburgh, Pa. 15222

Order No. 267-001

Requested by F. E. Landry	Requisition No. CE-001	Charge Number G.O. 267
Affirming Verbal Order Below	Inquiry No. See Reply	Date of Order 11-11-70
Notify F. E. Landry	Required Delivery As Below	Quoted Delivery As Below
Rhodes	Quotation No./Date See Below	F O B Factory/Frt. Allow
	Terms See Below	Ship VIA Best Way

General Electric Company  
Industrial Sales  
Oliver Building  
Mellon Square  
Pittsburgh, PA 15222  
Atten: Mr. H. E. Finke

Quantity	Description	Price
2	General Electric heavy duty MS 7000 Series combustion gas turbine generator units, each unit consisting of the equipment listed on the G. E. Quotation No. 341-78254 dated October 30, 1970, and signed by Howard E. Finke (Rev. 11-12-70)	\$7,656,600.00/ Lot
	Technical direction of installation for the gas turbines as per quotation No. 4251-70007 dated 9-15-70 and signed by M. I. Cleveland	\$38,020.00/each

General Electric steam turbine sized for the following conditions:

Inlet conditions: 1250 psig—960°F. Automatic Extraction 216,000 #/hr. @ 600 psig.

Automatic Extraction—483,000 #/hr. @ 260 psig. Exhaust—217,000 #/hr. @ 120 psig. Complete with hydrogen cooled 44,000 KVA, .85 power factor, 60 cycle, 3 phase, 3,600 RPM, 13,800 Volts, 158 short circuit ratio, synchronous generator, with coolers designed for 95°F and 125 psig cooling water. To be complete with accessories and other equipment listed on G. E. Quotation # 341-73254-B (Rev.) dated November 6, 1970, and signed by Howard E. Finke. This price covers technical supervision of installation

\$1,786,805.00/  
Lot

All prices above for both gas turbines, generators, steam turbines, etc. cover freight to accessible railyard nearest customer's site.

Any omissions in this Purchase Order, but specified in the quotations of General Electric Company ("seller") referred to above, will apply.

PPG Industries, Inc. "purchaser" reserves the right to accept or reject a five year, 40,000 hour, maintenance contract on the gas turbines beginning on the commercial operating date at a cost of \$13.75 per fired hour per unit based on base load service, natural gas fuel and one start per 1000 hours or less. The \$13.75 per fired hour would be subject to change each year *after the first year of the contract* based on escalation of labor and/or materials from the date of commercial operation. This decision on the maintenance contract does not have to be made by the purchaser until the commercial operating date.

The price would cover parts or repair, technical direction, monthly inspection and labor for all normal maintenance. This does not include breakdown coverage.

The purchaser has the right to purchase a spare rotor for the gas turbines within twelve months after date of purchase order, for a price of \$590,000.

### *Terms of Payment*

Eighty percent upon shipment from seller's factory, fifteen percent thirty days from date of shipment and five percent upon completion but not later than 180 days from date of shipment, provided that sellers shall have fulfilled all provisions of the Purchase Order as far as possible up to the time specified.

### *Cancellation*

The purchaser shall have the right to terminate this Purchase Order by written notice to seller on or before May 1, 1971, if purchaser's Board of Directors have not theretofore authorized the construction by purchaser of a 1500 tons per day chlorine caustic soda plant facility at Lake Charles, Louisiana, and the requisite power generating facilities therefore, or if the plant facility thus authorized shall not require gas turbines; provided, however, that if purchaser shall so terminate this Purchase Order, purchaser shall pay seller a termination charge in the amount of \$21,000, upon payment of which sum all obligations of either party to the other hereunder shall terminate. The purchaser shall have the right to terminate this Purchase Order after May 1, 1971, but prior to June 1, 1971, under same terms, for an additional charge in the amount of \$10,000 for steam turbine and not to exceed \$150,000/Lot for two (2) gas turbines.

### *Delivery*

Seller will ship the gas turbines by September, 1972. The steam turbine will be shipped 18 months after final steam output quantities are decided upon. Seller will provide purchaser with production schedule promptly and on a monthly basis thereafter.

### *Transfer of Ownership*

Purchaser reserves the right to assign or transfer this Purchase Order in its entirety to a third party, without any additional cost or penalties whatsoever to purchaser or such

third party assignee as a result of such assignment; provided such third party assignee shall undertake to construct and own the power generating facilities requisite to purchaser's said chlorine-caustic soda plant facility.

### *Performance and Material Warranty*

The seller has the obligation to make at its own expense such alterations and additions or replacements as required to meet specifications for a period of one year after start-up date.

### *Guarantee*

The seller will guarantee materials or equipment and workmanship to be free of defects for a period of one year from start-up or 18 months after delivery whichever comes first. Any repairs, alterations, or replacements found to be necessary shall be made at no cost whatsoever to purchaser. Each such repair, modification, or replacement shall carry same warranty commencing on the date of the installation as the original. If the seller does not remedy and/or replace the work to comply with the foregoing requirements within a reasonable time after written notice, the purchaser may remedy and/or replace it at seller's expense.

Seller will furnish as soon as possible:

<i>Copies</i>	<i>Title</i>
7	Certified dimension prints
7	Performance curves
7	Installation, operation and maintenance instructions
7	Parts list and assembly drawings including bearings identification by Bearing Mfg. name and symbol or number, etc.
7	Recommended spare parts list with prices
7	Lubrication manuals
7	Wiring diagrams
7	Any other data necessary to install, maintain, and operate the above equipment

(One (1) reproducible of each may be furnished in lieu of copies as shown)

Confirming verbal order of November 11, 1970, to: J. J. Broussard, H. E. Finke, Don Govdon, Jack Hull

*Approved Nov. 11, 1970  
L. W. Wilcox*

[Italicized material appears as handwritten notation in record]

LA O S 20-04  
NSPS

DEC 23 1976

Mr. T. G. Taylor  
Technical Manager  
PPG Industries, Inc.  
P.O. Box 1000  
Lake Charles, Louisiana 70601

Dear Mr. Taylor:

We have reviewed your letter of November 12, 1976 concerning the two steam generators of Powerhouse C.

As we stated in our letter of October 5, 1976, the applicability of the New Source Performance Standards (NSPS) depends solely on the facts relating to the types of equipment for which NSPS regulations have been issued. The regulations apply to a facility the construction or modification of which is commenced after the date of publication of any standard (or, if earlier, the date of publication of any proposed standard) applicable to that facility. The information you have provided shows that the commencement of the construction of the two steam generators was after the publication of the proposed regulation for fossil fuel fired steam generators. Even though you may have ordered equipment before the date of the proposed regulations that would be completely useless without the steam generators, that action is irrelevant to determine the applicability of the regulations to the two steam generators.

We hope that this discussion makes it clear why the two steam generators are subject to the provisions of the Standards of Performance for New Stationary Sources, 40 CFR Part 60.

If you still desire to have a meeting discussing this determination, please contact Mr. James Veach of my staff by letter or by telephone at (214) 749-2142.



Sincerely yours,

Original Signed By

O. W. LIVELY  
Acting Director  
Enforcement Division

*JV12/6*  
6AEL:JVeach:ma:X2142:11-76:Retyped:12-6-76

*JV12/6*  
6AEL  
Collins

6AEA  
Bernath

*JF*  
Fahrenthold  
6AEA  
12/17/76

cc: Mr. James F. Coerver  
Technical Secretary  
Louisiana Air Control  
Commission  
P. O. Box 60630  
New Orleans, Louisiana 70160

bcc:DSSE

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notation in record]

# ENVIRONMENTAL PROTECTION AGENCY

*VI B 1a*  
*File Code*

12-29-76

## MEMORANDUM:

SUBJECT: Determination of Applicability to NSPS  
Subpart D.

FROM: Director, Division of Stationary Source  
Enforcement

TO: O.W. Lively, Acting Director  
Enforcement Division (6AE)

This is in response to your memo of December 7, 1976, requesting a determination as to whether a waste heat recovery boiler used to produce steam would fall under NSPS for fossil fuel fired steam generators.

Section 60.41(a) defines a fossil fuel fired steam generating unit to be "a furnace or boiler *used in the process of burning fossil fuel* for the purpose of producing steam by heat transfer."

Since the boiler in question is not used in the process of burning fossil fuel, but rather in the process of waste heat recovery, it is our determination that the boiler in question would not be a fossil fuel fired steam generator as defined under NSPS, Subpart D.

If you have any further questions on this determination, please contact Craig Cobert (202) 755-2564 of my staff.

/s/ *EER*  
Edward E. Reich

[Italicized material appears as handwritten material in record; concurrence and routing notations and date-received stamp omitted in printing]

UNITED STATES ENVIRONMENTAL  
PROTECTION AGENCY

DATE: Dec. 7, 1976

SUBJECT: Request for Determination Relative to Subpart  
D, NSPS

FROM: O. W. Lively, Acting Director  
Enforcement Division (6AE)

TO: Ed Reich, Director  
Division of Stationary Source Enforcement  
(EN-341)

This is to request that you render a determination of applicability to NSPS, Subpart D, for the following situation.

A power generating station is operating gas and oil fired turbines. The exhaust from the turbines is routed to a waste heat recovery boiler where it is used to produce steam. However, no combustion of either the exhaust gases or supplementary fuels occurs in the boiler. The heat input to the boiler as a result of the exhaust gases is in excess of 250 MM Btu/hr.

The question of applicability arises from a reading of Section 60.40 and 60.41(a). The former states that Subpart D applies to each fossil-fuel fired steam generating unit (of appropriate size). Section 60.41(a) defines a steam generating unit to mean a boiler "used in the process" of generating steam. What we have is a boiler "used in the process" of generating steam, although the combustion of the fossil fuel takes place in the turbine unit rather than the boiler.

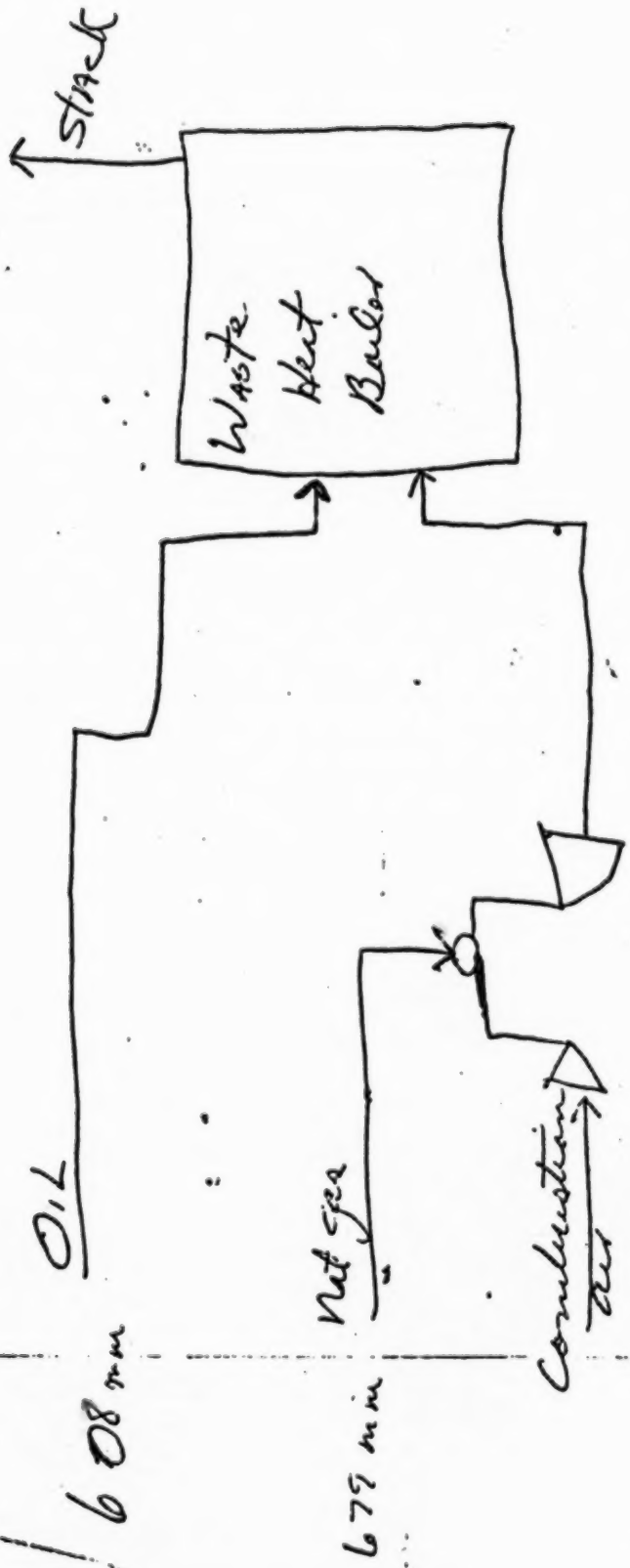
We feel this situation to be of sufficient novelty to request your determination. Should you need additional information, you may contact Gary Bernath of my staff at (214) 749-7675.

[Handwritten notations omitted in printing]

March 10, 1977  
Meeting in Dallas  
EPA and PPG, Lake Charles, La.

Jim Veach, EPA. Legal Branch  
Gary Bernath, EPA, Engineering Branch  
R. J. SAMUELSON, PPG - PITTSBURGH, PA.  
Georgie Cheney PPG - Pittsburgh, Dist Counsel.  
J. E. Wyche PPG - Lake Charles, La.





gas turbine

Problem - sulfur from oil (1.0)  
all comes out of stack

wants to include turbine gases  
in testing to meet SO<sub>2</sub> standard

[PPG Emblem]

INDUSTRIES

PPG Industries, Inc./One Gateway Center  
Pittsburgh, Pennsylvania 15222/Area 412/434-2145

GEORGE P. CHANEY, JR., Assistant Counsel

April 13, 1977

[Received EPA Region VI, 1977 Apr. 14 AM 9:07,  
Enforcement Division]

Mr. Howard Bergman  
Director, Enforcement Division  
Environmental Protection Agency  
Region VI  
1600 Patterson Street  
Dallas, Texas 75201

Re: Request for Determinations under 40 C.F.R.  
§ 60.5.

Dear Mr. Bergman:

By this letter, PPG Industries, Incorporated, ("PPG"), seeks a determination that construction of two "waste heat" boilers, components of "Power Plant C" at PPG's Lake Charles, Louisiana works ("Lake Charles Works") was "commenced" within the meaning of Section 111 (a) (2) of the Clean Air Act, as amended, 42 U.S.C. § 1857c-6, prior to August 17, 1971, the date of proposed "new source" emission regulations for fossil-fuel fired steam generators. Alternatively, PPG seeks a determination that the regulations for fossil-fuel fired steam generators do not apply to waste heat boilers such as those being installed at the Lake Charles works. This request for determinations is submitted pursuant to 40 C.F.R. § 60.5 (captioned "Determination of construction or modification").

Power Plant C is a fully coordinated power generating system, composed of two gas turbine generators (produc-

ing electricity) and two "waste heat" boilers (producing process steam). The first of the gas turbines will begin operation by the end of April of this year, and the companion "waste heat" boiler is projected to go on line in June. The second set of such units (turbine plus "waste heat" boiler) is scheduled for start-up in the third quarter of 1978. The determinations sought by PPG are essential to clarify tentative findings contained in a letter from Mr. O. W. Lively, Acting Director, Enforcement Division, Region VI, dated October 5, 1976, which findings have been the subject of continuing subsequent correspondence and discussion.

Should it be determined both that construction of the "waste heat" boilers of Power Plant C was not "commenced" until after August 17, 1971, and that the new source regulations for fossil-fuel fired steam generators apply to such "waste heat" boilers, PPG by this letter seeks an interpretation of the regulations as applied to the "waste heat" boilers. Because of the manner in which the standards of performance are written (explicit formulas set out allowable emissions where specified fuels are used), they cannot be readily applied to the "waste heat" boilers. The regulations would in some way have to be adapted to take into account the fact that only part of the heat used is created by the firing of fuel within the boilers themselves.

To aid in your consideration of this request, two memoranda are appended. Appendix A is a statement of the facts relevant to the determinations sought by PPG. Appendix B is a memorandum prepared by counsel based on those facts analyzing the relevant provisions of the Clean Air Act and implementing regulations.

The long and short of the matter is that the present regulations for steam generators seem to have been construed to prevent, or at least to tend to prevent, the possibility of "recapturing" waste heat, a very desirable goal from both an energy conservation and economic standpoint. On the other hand, if the turbines were operated independently of the boilers, i.e., if no attempt were made to use the waste heat from the turbine exhaust in the boilers, full compliance with the EPA standards

of performance could be achieved. This anomaly is especially troubling to PPG since the design of and course of construction for the combined turbine-"waste heat" boiler units was set in 1970, well before the advent of the standards of performance.

Very truly yours,

/s/ *George P. Cheney, Jr.*  
 GEORGE P. CHENEY, JR.  
 Assistant Counsel

cmr

Attachments

cc: Edward E. Reich  
 Director, Division of Stationary  
 Source Enforcement  
 Environmental Protection Agency  
 401 M Street, S.W.  
 Washington, D.C. 20460

[*Italicized material appears as  
 handwritten material in record*]



## APPENDIX A

## MEMORANDUM OF FACTS

This memorandum sets out circumstances surrounding the design and construction of a new power plant at the Lake Charles, Louisiana works ("Lake Charles works") of PPG Industries, Inc. ("PPG"). The purpose of this new power plant, known as "Power Plant C", was and is to generate electricity and process steam for the manufacture of chlorine and caustic soda at the works.

## A. Design Work

PPG became engaged in the overall design and construction of Power Plant C in 1970. The design established at that time called for the construction of two gas turbine generators (producing electricity) and two "waste heat" boilers (producing process steam). The "waste heat" boilers, as their name suggests, were designed to recapture the turbine exhaust gases from the gas turbine generators. The boilers would do so by using the heat within those exhausts, which would otherwise be wastefully dissipated into the atmosphere, for the generation of steam. The costs associated with the generation of electricity in Power Plant C were such that the project could not have been contemplated without having built into it a capacity to make fruitful use of the heat cast off by the gas turbines.

Based upon the design specifications for the "waste heat" boilers, 38.3 percent of the heat used to generate steam within the "waste heat" boilers will be supplied by the exhausts from the gas turbine generators. The remainder of the heat used by the "waste heat" boilers will be produced by the firing of fuel oil or gas within the units themselves.<sup>1</sup>

<sup>1</sup> Taking one of the boilers by itself, 598 MM BTU/hr is to be provided by the firing of oil, and 371.2 MM BTU/hr is to be provided by the "waste heat" from the exhaust from one of the turbines.

## B. Contracts

The gas turbine generators were ordered in November, 1970. The specification book for the whole of Power Plant C was completed by the end of February, 1971.

Once the design of the gas turbines was determined and orders for them were placed, there were very few design options as to how the "waste heat" boilers could be built to accommodate the turbines. In fact, insofar as the quality of emissions might be affected, only three possible methods of firing the "waste heat" boilers existed: (1) front firing, (2) tangential firing, and (3) gas recirculation. The design actually chosen by PPG—tangential firing—minimizes the amount of nitrogen oxides passed by the system into the atmosphere. Thus, once the design of the gas turbines was settled and the turbines were placed on order, PPG could not have constructed "waste heat" boilers with emission characteristics more favorable than those actually constructed, while the economics of the system as a whole absolutely required that some form of "waste heat" boiler be built.

## C. Construction Work

Some early work on the site of Power Plant C (leveling, cutting trees, general site preparation, etc.) was carried out in the summer of 1971. Further construction was not conducted immediately. In addition to the fact that the turbines had not been delivered, PPG encountered serious difficulties in securing a long-term supplier of fuel. Both matters were resolved, but the resolution of them took time.

## 1. The first set of turbine-boiler units.

In October of 1974, the purchase order for the first of the two "waste heat" boilers was issued to Combustion Engineering, Inc. The foundation for the first of the "waste heat" boilers of Power Plant C was poured on September 18, 1975, and the actual assembly of this boiler began on February 1, 1976. The foundation for the first of the gas turbine generators was poured beginning on

November 19, 1975; the assembly of this gas turbine began on April 8, 1976.

The first of the gas turbines was accepted from the contractor on February 23, 1977. This turbine is expected to begin operation on or about the first week of May. Acceptance of the first "waste heat" boiler is anticipated on or about May 15, 1977, and actual start-up of this boiler is expected around June 1, 1977.

## 2. The second set of turbine-boiler units.

The foundation for the second of the gas turbine generators ordered in 1970 was poured on February 15, 1977. It is anticipated that this second gas turbine will be in operation by mid-1978. The order for a "waste heat" boiler to be associated with this second gas turbine generator was placed on June 16, 1976, and the foundation for this second boiler was poured on December 22, 1976. Operation of this "waste heat" boiler is expected in the third quarter of 1978.

## D. Projected Operating Characteristics

On the basis that 1 percent sulfur No. 6 fuel oil will be fired in the "waste heat" boilers, the amount of sulphur dioxide discharged by those boilers will be 0.67 lbs. per million BTU of heat from all sources used in the "waste heat" units themselves, and 0.50 lbs. per million BTU of heat introduced into the electricity and steam generating system of Power Plant C as a whole.

Projections for emissions of Nitrogen oxides from the combined turbine "waste heat" boiler units are uncertain. However, on the basis of the engineering work completed to date, the total amount of nitrogen oxides discharged under gas turbine inlet conditions of 75° fahrenheit and 60 percent relative humidity by the "waste heat" boilers should be approximately 0.39 lbs. per million BTU of heat from all sources used in the "waste heat" boilers.<sup>2</sup>

<sup>2</sup> The "waste heat" in the turbine exhausts entering the boilers should contain approximately 0.63 lbs. NOx per MM BTU. The amount of nitrogen oxides discharged by the "waste heat" boilers attributable solely to fossil fuels fired within the boilers themselves

This is equivalent to approximately 0.29 lbs. per million BTU of heat introduced into the system of Power Plant C as a whole from all sources of energy.

Were the exhausts from the gas turbine generator allowed to pass directly into the atmosphere without being recaptured by the "waste heat" boilers, they would be expected to contain 0.335 lbs. of nitrogen oxides per MM BTU of heat derived from fossil fuel combustion within the turbine generator.

/s/ *George P. Cheney*  
 GEORGE P. CHENEY, JR.  
 Assistant Counsel  
 PPG Industries, Inc.  
 One Gateway Center  
 Pittsburgh, Pennsylvania  
 15222  
 (412) 434-2145

Dated: April 12, 1977

[Italicized material appears as handwritten material in record]

is expected to be roughly 0.24 lbs. per MM BTU derived from such fossil fuels. The NOx discharged by the "waste heat" boilers per MM BTU from all sources entering the boiler is:

$$X = (598.3)(0.24 + (371.2)(0.63)) = 0.39$$

969.5

## APPENDIX B

## MEMORANDUM OF LAW

This memorandum first assays the statutory provisions and regulations applicable to a determination whether the "waste heat" boilers at the Lake Charles, Louisiana works ("Lake Charles works") of PPG Industries, Inc. ("PPG"), are new sources within the meaning of the Clean Air Act. Then it turns to a consideration of whether the "waste heat" boilers are covered or affected by the new source standards of performance for fossil-fuel fired steam generators. Finally, this memorandum assesses the difficulties of application which arise if the new source regulations are deemed to pertain to the "waste heat" boilers. The factual basis for the discussion in this memorandum is contained in the accompanying Memorandum of Facts.

Suggested determinations are set out in the conclusion of this memorandum.

# I. THE "WASTE HEAT" BOILERS OF POWER PLANT C ARE NOT "NEW SOURCES" WITHIN THE MEANING OF THE CLEAN AIR ACT

## A. Power Plant C As A Whole Is Clearly Not A "New Source" Within The Meaning Of The Clean Air Act And Implementing Regulations

Under Section 111(a)(2) of the Clean Air Amendments of 1970, as amended, 42 U.S.C. § 1857c-6(a)(2), the term "new source" means "any stationary source, the construction or modification of which is commenced after the publication of regulations (or, if earlier, proposed regulations) describing a standard of performance under this section which will be applicable to such source." Under the EPA regulations, construction has "commenced" if "an owner or operator has undertaken a continuous program of construction . . . or has entered into a contractual obligation to undertake and complete, within a reasonable time, a continuous program of construction . . . ." 40 C.F.R. § 60.2(i). Proposed regula-

tions for fossil-fuel fired steam generators were promulgated on August 17, 1971. Well before that date, PPG had undertaken a continuous program of construction respecting Power Plant C.

The planning and design for Power Plant C were begun in the 1960's. The order for the construction of the central facilities of Power Plant C, the gas turbine generators, were issued on November 11, 1970. The specification book for the whole of Power Plant C was completed by the end of February, 1971. Site preparation work was accomplished in the summer of 1971. PPG thus established the course of construction in November of 1970 and that course has been continuous down to the present and will remain so until the entire system is complete.

## B. The "Waste Heat" Boilers Are Fully Integrated Parts Of Power Plant C, And The Course Of Their Construction Cannot Be Severed From That Of The Power Plant As A Whole

As a matter both of design and economics the construction of "waste heat" boilers could never have been considered, and was not considered, to be a matter separate from the construction of the gas turbine generators or of Power Plant C as a whole. The design work for the turbines reflects the design criteria for the "waste heat" boilers, and *vice versa*. The Lake Charles works needs the new power plant both to generate electricity and to manufacture process steam for the production of chlorine and caustic soda at the works. The most energy-efficient way to accomplish these twin goals is to employ a design which recaptures the very considerable heat value in the exhaust gases from the gas turbine generators. "Waste heat" boilers provide the mechanism for this recapture. From both an economic and an energy standpoint, the project would not be feasible unless the "waste heat" boilers could be employed as a complement to the gas turbine generators.

In short, once PPG was committed to building the gas turbine generators, it was not less committed to build the



"waste heat" boilers. Even though the actual order for the first "waste heat" boiler was not made to Combustion Engineering until October of 1974, PPG was bound to construct the "waste heat" boilers as of the time (November 1970) it was committed to the purchase of two gas turbine generators. The "waste heat" boilers cannot be severed from the turbine generators upon which they depend. Looking merely to the October 1974 date on a written communication between PPG and Combustion Engineering as the sole basis for determining when construction of the "waste heat" boilers was "undertaken" (the term used in the regulations) by PPG, is, in the context of this integrated facility, very misleading. The undertaking was begun much earlier. The preliminary work and initial site preparation for all the components of Power Plant C were begun at one time; there was no separate program for constructing gas turbine generators apart from "waste heat" boilers.

C The Decided Cases Do Not Warrant Treating The "Waste Heat" Boilers Of Power Plant C As "New Sources"

The purpose for distinguishing "new sources" from other sources under the Act and regulations is to avoid undue burdens on those owners or operators who have no means of adjusting their existing facilities or their inescapable obligations. Once committed to the construction of the gas turbine generator component of Power Plant C, PPG had (and now has) no choice but to press the project to its conclusion by constructing the necessary "waste heat" boilers. No design adopted by PPG could have reduced emissions below the levels associated with the current "waste heat" boilers.

Two recent judicial decisions bear on resolution of when PPG "commenced" construction of Power Plant C. In *Montana Power Company v. Environmental Protection Agency*, — F. Supp. —, 2 PCG ¶ 40,065 (D. Mont., decided January 27, 1977), the court concluded that construction of a power plant had commenced prior to the effective date of EPA's regulations for the prevention of significant deterioration, within the definition of "com-

mence" in 40 C.F.R. § 52.21(b)(7). In the *Montana Power* case, although actual on-site construction had not begun by the effective date, the court found that EPA had failed to give due consideration to the prior irrevocable commitment of substantial funds and resources to the project and thus that construction had in fact "commenced" within the meaning of the regulations.

On the other hand, another federal court recently determined that a coal-fired generating plant actually ordered by a municipality after the promulgation of standards affecting such facilities was a "new source" within the meaning of the Clean Air Act and regulations. *United States v. City of Painesville*, — F. Supp. —, Civil Action No. 76-234 (N. D. Ohio, decided January 19, 1977). The court concluded that the City of Painesville, unlike PPG in the present situation, had entered into no binding commitment to build anything at all until after the date upon which the "new source" standards began to apply. The court further found that the City had actually changed the specifications of its coal-fired generating plant in January of 1972, well after the August 1971 effective date for the regulations.

The present circumstances are comparable to the facts in the *Montana Power* case, and differ considerably from the setting of the *Painesville* decision. PPG was fully committed to the construction of Power Plant C before the new source standards for fossil-fuel fired steam generators were proposed. Second, in the *Painesville* case the court stresses the fact that no purchase of equipment actually made by the municipality prior to the promulgation of new source standards would have been "incompatible" with a facility which complied with the new source standards. (Slip opinion, at 6.) By way of contrast, in the present situation, PPG had by August 1971 committed itself to the combined turbine "waste heat" boiler design which is at odds with the new source standards for boilers.

Especially noteworthy is the fact that preclusion of use of the waste heat in the boilers would have no favorable effects whatsoever on the environment; the exhausts from the gas turbine of Power Plant C would then pass di-

rectly into the atmosphere with their full cargo of pollutants, and process steam would have to be generated entirely by firing fossil fuel. Additional reasons for avoiding such an unwholesome result, both environmentally and economically, will be reviewed in Part II below.

## II. EVEN IF IT IS CONSIDERED THAT CONSTRUCTION DID NOT COMMENCE PRIOR TO AUGUST 17, 1971, A "WASTE HEAT" BOILER IS NOT A FACILITY COVERED BY THE REGULATIONS GOVERNING "NEW SOURCES"

### A. The Existing Regulations Are Not Structured To Apply To Steam Generators Fired By A Combination Of Fossil Fuels And "Waste Heat"

The only regulations that could possibly establish emissions standards for "waste heat" boilers are those governing "fossil-fired steam generators" in Part 60, Subpart D, of Title 40 of the Code of Federal Regulations. Those regulations govern facilities that produce steam by burning "fossil fuel." 40 C.F.R. § 60.41. But "waste heat" boilers are fired by a *combination* of waste heat and fossil fuel, and it is the special circumstances arising from the combination which the regulations do not address.

As promulgated, the regulations were not written to pertain to boilers relying in significant part on certain waste fuels. The standard for nitrogen oxides, for example, excluded from its coverage situations where new boilers were built for fuel consisting of "lignite or a solid fossil fuel containing 25 percent by weight, or more of coal refuse . . . ." 40 C.F.R. § 60.44(b). A recently proposed amendment to the regulations would, however, establish standards for emissions of nitrogen oxides from new lignite-fired steam generators. See 41 *Fed. Reg.* 55792 (December 22, 1976).

In addition, the standards were amended on November 22, 1976, to provide specific language bearing on fossil-fuel fired steam generators which also used wood residue as fuel (commonly called "hog boilers"). See 41 *Fed. Reg.* 51397-51400 (November 22, 1976).

These recent changes and proposed changes in the regulations clarify matters for those who wish to fire boilers with waste fuels. However, they do not address specifically the present situation where "waste heat" itself is sent to the boiler. The regulations simply are not structured to apply to the present situation.

### B. The Existing Regulations Should Be Deemed Not To Apply To "Waste Heat" Boilers

Where regulations are not written to apply to a special set of facts, the regulations should be deemed not to apply in circumstances where the special facts are present. See *WAIT Radio v. Federal Communications Commission*, 135 U.S. App. D.C. 317, 321, 418 F.2d 1153, 1157 (1969). The Agency has already adopted this course of action in adopting the special regulatory provisions for hog boilers referred to above. Similarly, the existing regulations should be deemed not to apply to "waste heat" boilers.

## III. IF THE REGULATIONS ARE DEEMED TO APPLY TO THE "WASTE HEAT" BOILERS AT THE LAKE CHARLES WORKS, THEY SHOULD BE ADAPTED TO TAKE INTO ACCOUNT THE FACT THAT ONLY PART OF THE HEAT USED IS CREATED BY THE FIRING OF FUEL WITHIN THE BOILERS THEMSELVES

### A. The Standards For Nitrogen Oxides Cannot Be Brought To Bear On The "Waste Heat" Boiler

The standards for nitrogen oxides in 40 C.F.R. § 60.44 cannot readily be applied to the "waste heat" boilers of Power Plant C, as they make no provision for the use of the exhausts from the gas turbine generators as a source of heat in the boilers.<sup>1</sup> The exhausts from the gas

<sup>1</sup> Exhausts from gas turbine generators are at present unregulated by new source standards. Even if such standards for gas turbines should be promulgated, the gas turbine generators of Power Plant C would clearly not be "new sources" for purposes



turbine generators are not subject to emissions standards upon their discharge from the turbines themselves. In such circumstances equitable considerations suggest that passage of the turbine exhausts through the "waste heat" boilers should no less receive similar treatment, i.e., be deemed to fall outside the new source standards of performance.

Conceptually, one might consider carving up the nitrogen oxides emitted from the "waste heat" boilers into two segments, one attributable to the "waste heat" component and the other to the oil-fired component. The nitrogen oxides attributable to the oil-fired component would, however, be difficult to regulate separably under the present standards because process and analytical limitations would prevent obtaining a precise and meaningful allocation between the two components of the nitrogen oxides emissions.<sup>2</sup>

**B. The Standards For Sulfur Dioxide Require Considerable Adaptation To Test Compliance Against "Total Heat Input", As The Regulations Require**

The standards for sulfur dioxide of 40 C.F.R. § 60.43 indicate that the sulfur dioxide discharged into the atmosphere shall be measured against the heat derived from various fossil fuels. If these standards are nonetheless applied to the "waste heat" boilers, some very considerable accommodations by way of interpretation must be made.

Section 60.43(c) provides specifically that "[c]ompliance shall be based on the total heat input from all fossil fuels burned, including gaseous fuels." The "waste heat" entering the boilers should be included in this "total heat input", even though the actual "waste heat" input to the

of such regulations. PPG could thus, if it chose, allow the exhausts from the gas turbine generators to pass freely into the atmosphere. It obviously prefers not to adopt such a wasteful course of action.

<sup>2</sup> The same circumstances would prevent a meaningful and precise allocation of the particulate emissions.

boiler is in the form of hot gases. These gases were the product of a prior combustion.

This construction of the standards is supported by prior Agency decisions. As noted previously, recent amendments to the standards of performance for fossil-fuel fired steam generators enlarged their scope to include facilities burning wood residues in combination with fossil-fuels. The preamble to this recent amendment makes clear that fuel mixtures can play a critical role in achieving compliance with the standards:

Complying with the standard by firing low sulfur fossil fuel requires an adequate supply of fuel with a sulfur content low enough to meet the standard. However, it would be possible for the owner or operator to fire, for example, a relatively high sulfur fossil fuel with a very low sulfur fossil fuel (e.g., natural gas) to obtain a fuel mixture which would meet the standard. The low sulfur fuel adds to the heat input but not to the sulfur dioxide emissions and, thereby, has an overall fuel sulfur reduction effect.

41 Fed. Reg. 51397 (November 22, 1976)

**CONCLUSION**

Power Plant C at the Lake Charles works has been designed as an energy-efficient and economical supplier of both electricity and steam to an industrial process which needs both items. If deemed to apply, however, the new source standards for fossil-fuel fired steam generators threaten to prevent use of the critical "waste heat" component of the feed to the boiler segment of the power plant. The complementary turbine-boiler aspects of the power plant should be considered in the Agency's consideration of the request for determinations under 40 C.F.R. § 6.05.

Specifically, PPG asks

- (1) that the Agency determine that PPG had embarked upon a continuous course of construction



at Power Plant C prior to August 17, 1971, such that the new source standards for fossil-fuel fired steam generators do not apply; or alternatively,

- (2) that the Agency determine that the regulations for fossil-fuel fired steam generators do not apply to "waste heat" boilers such as those being installed at Power Plant C.

In the event that the Agency determines that the "waste heat" boilers at Power Plant C are subject to new source standards for fossil-fuel fired steam generators, the Agency should (1) conclude that the standards for nitrogen oxides cannot meaningfully be applied to the emissions discharged by the "waste heat" boilers, and (2) measure compliance with the standards for sulfur dioxide against the total heat input to the boiler, as required, while construing total heat input to include the "waste heat" charged to the boiler.

Respectfully submitted,

/s/ *George P. Cheney, Jr.*  
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April 12, 1977

[Italicized material appears as handwritten material in record]

# ENVIRONMENTAL PROTECTION AGENCY

Apr. 14, 1977

NSPS Compliance Testing

Original Signed by O. W. Lively, Jr. for

Howard G. Bergman

Director

Enforcement Division (6AE)

Ed Reich

Director, Stationary Sources

Enforcement Division (EN-341)

PPG Industries, Inc. at its Lake Charles, Louisiana, plant is constructing two fossil fuel fired steam generators which are part of a combined-cycle power plant. Natural gas is burned in two gas turbines. The gases from the two turbines are fed into the two steam generators. In addition fuel oil is burned in the steam generators. The heat input from each turbine is about 679 million Btu. The fuel oil heat input to each steam generator is about 608 million Btu. The steam from the generators will be used to drive one turbo-generator which furnishes steam for the chemical complex.

PPG has requested that the compliance testing be done while the steam generators are operating on fuel oil and the turbine gases. PPG is planning to use fuel oil with a sulfur content of 1% by weight. PPG estimates that if required to conduct performance tests while burning 100% fuel oil the steam generators will exceed the sulfur dioxide standard.

It is our understanding of prior determinations that the proper performance testing in this case would be a single test while burning 100% fuel oil. However, the change to allow the use of wood residue in compliance testing implies a change in approach; therefore, we request clarification of the policy.

[Handwritten notations and routing and concurrence notations omitted in printing]

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April 29, 1977

Received EPA Region VI  
1977 May—2 AM 10:11  
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Received May 2, 1977—9 A.M.  
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Mr. Edward E. Reich  
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Dear Messrs. Bergman and Reich:

On April 14, 1977, Mr. George P. Cheney, Jr., Assistant Counsel, PPG Industries, Inc., filed a request for determinations under 40 C.F.R. § 60.5 (the request is dated April 13, 1977). This request pertains to "waste heat" boilers at PPG's Lake Charles works.

On April 20, 1977, in an address to a Joint Session of Congress, President Carter spoke of measures "to encourage industries and utilities to expand what is called 'cogeneration' projects, which capture the steam which is now wasted from the electrical power production." (White House Press Release, at 5.) The "'cogeneration' projects" of which President Carter spoke and what the PPG request denominates as "waste heat" boilers are the same thing. A copy of President Carter's address is attached.

Very truly yours,

/s/ *Charles F. Lettow*  
CHARLES F. LETTOW

CFL/cc  
Attachment  
cc: George P. Cheney, Jr., Esq.  
(w/attachment)

[Italicized material appears as handwritten  
material in record]

For Immediate Release

April 20, 1977

OFFICE OF THE WHITE HOUSE  
PRESS SECRETARY

THE WHITE HOUSE

REMARKS OF THE PRESIDENT TO A  
JOINT SESSION OF CONGRESS

THE CAPITOL

9:05 P.M. EST

Mr. President, Mr. Speaker, Members of the Congress, and distinguished guests:

The last time we met as a group was exactly three months ago today on Inauguration Day. We have had a good beginning as partners in addressing our Nation's problems.

But in the months ahead, we must work together even more closely, to deal with the greatest domestic challenge that our Nation will face in our lifetime. We must act now—together—to devise and to implement a comprehensive national energy plan to cope with a crisis that otherwise could overwhelm us.

This cannot be an inspirational speech tonight. I don't expect much applause. It is a sober and a different presentation. During the last three months, I have come to realize very clearly why a comprehensive energy policy has not already been evolved. It has been a thankless job, but it is our job, and I believe that we have a fair, well-balanced and effective plan to present to you. It can lead to an even better life for the people of America.

The heart of our energy policy is—the heart of our energy problem is that we have too much demand for fuel that keeps going up too quickly, while production goes down, and our primary means of solving this problem is to reduce waste and inefficiency.

Oil and natural gas make up about 75 percent of our consumption in this country, but they only compromise

about 7 percent of our reserves. Our demand for oil has been rising by more than 5 percent each year, but domestic oil supplies have been dropping more than 6 percent.

Therefore, our imports have risen sharply—making us more and more vulnerable if supplies are interrupted—but early in the 1980's even foreign oil will become increasingly scarce. If it were possible for world demand to continue rising during the next few years at the rate of 5 percent a year, we could use up all the proven reserves in the entire world by the end of the next decade.

Our trade deficits are growing. We imported more than \$35 billion worth of oil last year, and we will spend much more than that this year. The time has come to draw the line.

We could continue to ignore this problem—as many have done in the past—but to do so would subject our people to an impending catastrophe. That is why we need a comprehensive national energy policy. Your advice has been an important influence as this plan has taken shape. Many of its proposals will be built on the legislative initiatives that you have taken in the Congress in the last few years.

Two nights ago, I spoke to the American people about the principles behind our plan and our specific goals for 1985:

To reduce the annual growth rate in energy consumption by more than 2 percent;

To reduce gasoline consumption by 10 percent;

To cut imports of foreign oil to less than 6 million barrels a day, less than half the amount that we will be importing if we do not conserve;

To establish a strategic petroleum reserve supply of at least a billion barrels, which will meet our needs for about 10 months;

To increase our coal production by more than two-thirds, over 1 billion tons a year;

To insulate 90 percent of American homes and all new buildings; and

To use solar energy in more than 2½ million American homes.



Now, I hope that the Congress will adopt these goals by joint resolution as a demonstration of our mutual commitment to achieve them.

Tonight I want to outline the specific steps by which we can reach those goals. The proposals fall into these central categories: First, conservation; second, production; third, conversion; fourth, development; and, of course, fairness or equity, which is a primary consideration of all of our proposals.

We prefer to reach those goals through voluntary cooperation with a minimum of coercion. In many cases, we propose financial incentives, which will encourage people to save energy and will harness the power of our free economy to meet our needs.

But I must say to you that voluntary compliance will not be enough—the problem is too large and the time is too short. In a few cases, penalties and restrictions to reduce waste are essential.

Our first goal is conservation. It is the cheapest, most practical way to meet our energy needs and to reduce our growing dependence on foreign supplies of oil. With proper planning, economic growth, enhanced job opportunities and a higher quality of life can result even while we eliminate the waste of energy.

The two areas where we waste most of our energy are transportation and our heating and cooling systems. Transportation consumes 26 percent of all our energy—and as much as half of that is waste. In Europe the average automobile weighs 2,700 pounds; in our country, 4,100 pounds.

Now, the Congress has already taken fuel efficiency steps and set standards which will require new automobiles to have an average efficiency of miles per gallon of 27.5 by 1985 instead of the 18 among new cars today. The entire fleet of cars is only 14 miles per gallon at this time.

To insure that this existing congressional mandate is met, I am proposing first of all a graduated excise tax on new gas guzzlers that do not meet Federal mileage standards. This tax will start low and then rise each year until 1985. In 1978, for instance, a tax of \$180

will be levied on a car getting only 15 miles per gallon, and for an 11-mile-per-gallon car the tax will be \$450. That is at the beginning. By 1985 the taxes on these wasteful new cars with the same low mileage, 15 miles per gallon or 11 miles per gallon, will have risen to \$1,600 and \$2,500.

All of the money collected by this tax on wasteful automobiles will be returned to consumers through rebates on automobiles that are more efficient than the mileage standards. We expect both better efficiency and also more automobile production and sales under this proposal. We will insure that American automobile workers and their families do not bear an unfair share of the burden.

And of course we will also work with our foreign trading partners to see that they are treated fairly.

Now I want to discuss one of the most controversial and most misunderstood parts of the energy proposal—a standby tax on automobile gasoline. Gasoline consumption represents half of our total oil usage. We simply must save gasoline, and I believe that the American people can meet this challenge. It is a matter of patriotism and a matter of commitment.

Between now and 1980 we expect gasoline consumption to rise slightly above the present level. For the following five years, when we have the more efficient cars on the road, we need to reduce consumption each year to reach our targets for 1985.

I propose that we commit ourselves to these fair, reasonable and necessary goals and at the same time write into law a gasoline tax of an additional five cents per gallon that will automatically take effect each year that we fail to meet our annual targets in the previous year. As an added incentive, if we miss one year, but are back on the track the next year, then the additional tax should come off. Now, if the American people respond to this challenge, we can meet these targets, and under these circumstances this gasoline tax will never have to be imposed. I know and you know that it can be done.

As with other taxes, we must minimize the adverse effects on our economy—we must reward those who conserve, and penalize those who waste. Therefore, any proceeds from the tax—if it is triggered by excessive consumption—should be returned to the general public in an equitable manner.

I will also propose a variety of other measures to make our transportation system more efficient.

One of the side effects of conserving gasoline, for instance, is that state governments who have a limited amount of tax per gallon collect less money through gasoline taxes. To reduce their hardships and to insure adequate highway maintenance, we should compensate states for this loss through the Highway Trust Fund.

The second major area where we can reduce waste is in our homes and buildings. Some buildings waste half the energy used for heating and cooling. From now on we must make sure that new buildings are as efficient as possible, and that old buildings are equipped—or “retrofitted”—with insulation and heating systems that dramatically reduce the use of fuel.

The Federal Government should set an example. I will issue an Executive Order establishing strict conservation goals for both new and old Federal buildings, a 45 percent increase in efficiency for new buildings and a 20 percent increase in efficiency for old buildings by 1985.

We also need incentives, though, for those who own homes and businesses so that they will conserve. Those who weatherize buildings to make them more efficient will be eligible for a tax credit of 25 percent of the first \$800 invested in conservation and 15 percent for the next \$1,400.

If homeowners prefer, they may take advantage of a weatherization service which will be required from all regulated utility companies to offer. The utilities would arrange for contractors and provide reasonable financing to the homeowners. The customer would pay for the improvements through small, regular additions to the monthly utility bills. In many instances, these additional charges would be almost entirely offset by lower energy consumption brought about by energy savings.

Other proposals for conservation in homes and buildings include: First, direct Federal help for low-income residents; next, an additional 10 percent tax credit for business investments and conservation; third, Federal matching grants to non-profit schools and hospitals; and public works money for weatherizing State and local government buildings.

While improving the efficiency of our businesses and homes, we must also make electrical home appliances more efficient. I propose legislation that would for the first time impose stringent efficiency standards for household appliances by 1980.

We must also reform our utility rate structure. For many years we have rewarded waste by offering the cheapest rates to the largest users. It is difficult for individual States to make such reforms because of the intense competition in one State for new industry. The only fair way is to adopt a set of principles to be applied nationwide.

I am therefore proposing legislation which would require the following steps over the next two years:

First, phasing out promotional rates and other pricing systems that make natural gas and electricity artificially cheap for high-volume users and which do not accurately reflect actual costs;

Next, offering users peak-load pricing techniques which set higher charges during the day when demand is great and lower charges during the day when the demand is small.

We also need individual meters for each apartment in new buildings instead of one master meter. Tests have shown that this will have 30 percent of the electrical costs in the apartment buildings.

Plans have already been discussed for the TVA—the whole system—to act as a model in implementing such new programs which I have described to conserve energy.

One final step toward conservation is to encourage industries and utilities to expand what is called “cogeneration” projects, which capture the steam which is now wasted from the electrical power production. In Germany, for instance, 29 percent of total energy comes



from cogeneration. In this country, it was formerly about 19 percent, but now it is only 4 percent in the United States.

I propose a special 10 percent tax credit for investments in cogeneration.

Along with conservation, our second major strategy is production and rational pricing. We can never increase our production of oil and natural gas by enough to meet our demand, but we must be sure that our pricing system is sensible, that it discourages waste and encourages exploration and new production.

One of the principles of our energy policy is that the price of energy should reflect its true replacement cost, as a means of bringing supply and demand into balance over the long run. Realistic pricing is especially important for our scarcest fuels, oil and natural gas. However, proposals for immediate and total decontrol of domestic oil and natural gas prices will be disastrous for our economy and also for the American families. It would not solve the long-range problems of dwindling supplies. (Applause)

The price of newly discovered oil will be allowed to rise, over a three-year period, to the 1977 world market price, with allowances from then on for inflation. The current return to producers for previously discovered oil, that which already exists, would remain the same, except for adjustments because of inflation.

Because fairness is an essential strategy of our energy policy, we do not want to give producers windfall profits, beyond the incentives that they do need for exploration and production. (Applause) But we are simply misleading ourselves, if we do not recognize the replacement costs of energy in our pricing system.

Therefore, I propose that we phase in a wellhead tax on existing supplies of domestic oil, equal to the difference between the present controlled price of oil and the world price, and return that money collected by this tax to the consumers and the workers of America.

We should also end the artificial distortions in natural gas prices in different parts of the country which have caused people in the producing States to pay exorbitant

prices, while creating shortages, unemployment, and economic stagnation, particularly in the Northeast. We must not permit energy shortages to divide or balkanize our country.

We want to work with the Congress to give gas producers an adequate incentive for exploration, working carefully toward deregulation of newly discovered gas as market conditions permit.

I propose now that the price limit of all new gas sold anywhere in this country be set at the price of the equivalent energy value of domestic crude oil, beginning late next year, 1978. This proposal will apply both to new gas and to expiring intrastate contracts. It would not affect existing contracts that are presently in effect.

We must be sure that oil and natural gas are not wasted by industries that could use coal. Our third strategy will be therefore conversion from scarce fuels to coal wherever possible.

Although coal now provides only 18 percent of our total energy needs, it makes up 90 percent of our energy reserves. Its production and use do create environmental difficulties, but I believe that we can cope with them through strict strip-mining and clean air standards.

To increase the use of coal by 400 million tons or about 65 percent—we now use about 600 million tons—in industry and utilities by 1985, I propose a sliding scale tax, starting in 1979, on large industrial users of oil and natural gas. Fertilizer manufacturers and so forth which must use gas will be exempt from the tax. Utilities would not be subject to the tax until 1983, because it will simply take them longer to convert to coal.

I will also submit proposals for expanded research and development in coal. We need to find better ways to mine it safely and to burn it cleanly, and to use it to produce other clean energy sources like liquefied and gasified coal. (Applause.) We have already spent billions of dollars on research and development on nuclear power, but very little on coal. Investments here can pay rich dividends.

Even with this conversion effort, we still face a gap—between the energy we need and the energy that we can



produce or import. Therefore, as a last resort we must continue to use increasing amounts of nuclear energy.

We now have 63 nuclear power plants, producing about three percent of our total energy, and we also have about 70 more nuclear power plants which are licensed for construction. Domestic uranium supplies can support this number of plants just by the most conservative estimate for another 75 years at least. Effective conservation efforts can minimize the shift toward nuclear power. There is no need to enter the plutonium age by licensing or building a fast breeder reactor such as the proposed demonstration plant at Clinch River. (Applause.)

We must, however, increase our capacity to produce enriched uranium fuels for light water nuclear power plants, using the new centrifuge technology, which consumes only about one-tenth the energy of existing gaseous diffusion plants.

We must also reform the nuclear licensing procedures. New plants should not be located near earthquake fault zones or near population centers, safety standards should be strengthened and enforced, designs standardized as much as possible, and we need more adequate storage for spent fuel supplies.

However, even with the most thorough safeguards, it should not take 10 years to license a plant. It only takes three years—(Applause)—it only takes three years to license, design and build a plant in a country like Japan. I propose that we establish reasonable, objective criteria for licensing and the plants which are based on the standard design not require extensive design studies before the license is granted.

Our fourth strategy is to develop permanent and reliable new energy sources. The most promising, of course, is solar energy for which most of the technology is already available. Solar water heaters and solar space heaters are ready now for commercialization. All they need is some initiative to initiate the growth of a large new market in our country.

Therefore, I am proposing a gradual decreasing tax credit, to run from now through 1984, for those who purchase approved solar heating equipment. Initially, it

would be 40 percent of the first \$1,000 and 25 percent of the next \$6,400 invested to provide solar heating for homes.

Increased production of geothermal energy can be insured by providing the same tax incentives as exist for gas and oil drilling operations.

Our guiding principle, as we developed this plan, was that above all it must be fair. None of our people must make an unfair sacrifice. None should reap an unfair benefit.

The desire for equity is reflected throughout our plan:

In the wellhead tax, which encourages conservation but is returned to the public;

In a dollar-for-dollar refund of the wellhead tax as it affects home heating oil, particularly in the Northeast;

In reducing the unfairness of natural gas pricing;

In insuring that homes will have the oil and natural gas they need, while industry turns toward the more abundant coal that can also suit its needs;

In basing utility prices on true cost, so every user pays a fair share;

In the automobile tax and rebate system, which rewards those who save our energy and penalize those who waste it.

I propose one other step to insure proper balance in our plan. We need more accurate information about the supplies of energy, and about the companies which produce energy.

If we are asking sacrifices of ourselves, we need facts that we can count on. We need an independent information system that will give us reliable data about energy reserves and production, emergency capabilities and financial data from the energy producers.

I happen to believe in competition, and we don't have enough of it right now. (Applause) During this time of increasing scarcity, competition among energy producers and distributors must simply be guaranteed. I recommend that individual accounting be required from energy companies for production, refining, distribution and marketing—separately for domestic and foreign operations.

Strict enforcement of the antitrust laws based on this data may prevent the need for divestiture.

Profiteering through tax shelters should be prevented, and independent drillers should have the same intangible tax credits as the major corporations. (Applause)

The energy industry should not reap large unearned profits. Increasing taxes—increasing prices on existing inventories of oil should not result in windfall gains but should be captured for the people of our country. (Applause)

Now, we must make it clear from now on to everyone that our people, through their Government, will now be setting the energy policy for our country.

The New Department of Energy which the Congress is already considering should be established without delay. Continued fragmentation of Government authority and responsibility of our energy program for this Nation is both dangerous and unnecessary.

Two nights ago, I said that this difficult effort which I have outlined would be the moral equivalent of war. If successful, this effort will protect our jobs, it will protect our environment, it will protect our national independence, it will protect our standard of living, and it will also protect our future.

Our energy policy will be innovative, but it will be fair and predictable. It will not be easy. It will demand the best of us—our vision, our dedication, our courage, and our sense of common purpose.

This is a carefully balanced program, depending for its fairness on all its major component parts. It will be a test of our basic political strength and ability.

But we have met challenges before, and our Nation has been the stronger for it after the challenge was met. That is the responsibility that we face—you in the Congress, the members of my own Administration, and all the people of our country. I am confident that together we will succeed.

Thank you very much, and goodnight.

END

(At 9:33 p.m. EST)

[SEAL]

4. 5. 6.

UNITED STATES  
ENVIRONMENTAL PROTECTION AGENCY  
Washington, D.C. 20460

May 5, 1977

OFFICE OF ENFORCEMENT

MEMORANDUM

SUBJECT: Determination of Applicability to NSPS,  
Subpart D

FROM: Director, (EN-341)  
Division of Stationary Source Enforcement

TO: Howard G. Bergman, Director  
Enforcement Division (6AE)

This is in response to your request of April 14, 1977, for a determination as to whether the contribution from turbine exhaust gases may be added to a fossil fuel-fired steam generator's combustion effluent in determining compliance with NSPS.

On April 17, 1972, the Office of Enforcement ruled, in a similar case, that:

"The combustion turbine facility clearly is not subject to the present Federal regulations, and both the combustion effluent and thermal energy from the turbine may be discharged to the atmosphere without being limited by the standards. There would be no logic, then in penalizing an owner or operator who chooses to use the exhaust heat, which otherwise would be wasted, in a waste heat recovery steam generator unit, with or without supplemental fuel."

"Accordingly, we agree that both the heat input and the emission contribution of the combustion turbine will be excluded in determining whether the steam generator plant complies with the standards. Compliance will be judged only on the amount of heat and combustion effluents added by supplemental fuel used in the waste heat recovery steam generator, which is the affected facility."



Furthermore, we did not think we could justify the inclusion of waste materials in determining compliance with NSPS simply because the Agency, when it established NSPS for fossil fuel-fired steam generators on December 23, 1971, had gathered data for *only* units which burn 100 percent fossil fuel.

On November 22, 1976, EPA amended NSPS to permit blending of wood residue and fossil fuel during the performance tests. Several companies requested this amendment to enable them to comply with the SO<sub>2</sub> standard by burning a combination of wood residue and high sulfur fossil fuels. However, this amendment applies only to combinations of fossil fuel and food residue and to no other combination of fossil fuel and waste material. Therefore, any steam generator, which is burning a combination of fossil fuel and gas turbine exhaust gases and is subject to NSPS, is required to conduct the performance tests, as required by section 60.8, while burning 100% fossil fuel. This is to prevent interference from the gas turbine exhaust gases which might adversely affect emissions of NO<sub>x</sub>.

In accordance with this ruling, it will be necessary for PPG either to obtain lower sulfur fuel oil or to combine FGD with 1% fuel oil in order to comply with the SO<sub>2</sub> standard.

If either PPG or the Regional Office is not satisfied with the present regulation, we suggest that you express your concerns to the Emissions Standards and Engineering Division in Durham, N.C.

If you have any further questions on this determination do not hesitate to contact Craig Cobert of my staff at 755-2564.

/s/ Ed  
EDWARD E. REICH

[Italicized material appears as handwritten  
material in record]

Received  
EPA Region VI  
1977 May 11 PM 12:12  
Enforcement Division

# ENVIRONMENTAL PROTECTION AGENCY

Jun 8 1977

CERTIFIED MAIL—  
RETURN RECEIPT REQUESTED #560130

Mr. George P. Cheney, Jr.  
Assistant Counsel  
PPG Industries, Inc.  
One Gateway Center  
Pittsburgh, Pennsylvania 15522

Dear Mr. Cheney:

We have reviewed your letter of April 13, 1977, and the memoranda attached thereto, concerning the two "waste heat" boilers of "Power Plant C" at PPG's Lake Charles, Louisiana plant. We considered your letter as a request for reconsideration of the determination given in our letter of October 5, 1976. After consulting with the Division of Stationary Source Enforcement, we reaffirm our prior determination that the two "waste heat" boilers are subject to provisions of Standards of Performance for Fossil Fuel Fired Steam Generators, 40 CFR, Part 60, Subpart D.

As stated in our letter of December 22, 1976, to PPG, the determination of when a facility (subject to a Standard of Performance) commenced construction depends solely on the construction of that facility. Therefore, we cannot favorably consider your request that the commencement of construction of two "waste heat" boilers be tied to the construction of the entire Power Plant C.

The two boilers each have the capability of operating at more than 250 million British thermal units per hour heat input. For this reason the boilers come within the scope of the Standards of Performance for fossil fuel fired steam generating units even though the boilers can burn a combination of fuel and turbine exhaust gases.

As to the question of how to determine compliance, on April 17, 1972, the Office of Enforcement ruled, in a similar case that:



The combustion turbine facility clearly is not subject to the present Federal regulations, and both the combustion effluent and thermal energy from the turbine may be discharged to the atmosphere without being limited by the standards. There would be no logic, then in penalizing an owner or operator who chooses to use the exhaust heat, which otherwise would be wasted, in a waste heat recovery steam generator unit, with or without supplemental fuel.

Accordingly, we agree that both the heat input and the emission contribution of the combustion turbine will be excluded in determining whether the steam generator plant complies with the standards. Compliance will be judged only on the amount of heat and combustion effluents added by supplemental fuel used in the waste heat recovery steam generator, which is the affected facility.

Therefore, it is necessary for the performance tests to be conducted on 100% fossil fuel.

If you have any additional questions on this matter, please contact Mr. James Veach at (214) 749-2142.

Sincerely yours,

/s/ J. Paul Comola for  
JOHN E. WHITE  
Regional Administrator

bcc: Larsen, DSSE  
knudson (6S&A)

[Concurrence and routing notations and handwritten notations omitted in printing]

CLEARY, GOTTlieb, STEEN & HAMILTON  
1250 Connecticut Avenue, N.W.  
Washington, D.C. 20036

(202) 223-2151

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Twx 7108220108

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WINCHESTER HOUSE  
77 LONDON WALL  
LONDON EC2N 1DA, ENGLAND

July 18, 1977

Mr. Edward E. Reich  
Director, Division of Stationary Source Enforcement  
Environmental Protection Agency  
401 M Street, S. W.  
Washington, D. C. 20460

Dear Mr. Reich:

By letter dated June 8, 1977, from Mr. John C. White, Region VI Administrator, to Mr. George P. Cheney, Jr. of PPG Industries, Inc., the Agency stated its decision that two waste-heat boilers being constructed at PPG's Lake Charles, Louisiana works were subject to certain provisions of the Standards of Performance for Fossil-Fuel Fired Steam Generators, 40 C.F.R. Part 60, Subpart D. Mr. White's letter emphasized that the waste-heat boilers were capable of operation with 100 percent fossil fuel without use of turbine exhaust gases, even though the boilers normally would operate with a sub-

stantial waste-heat input from the turbine exhaust gases. The letter quotes from a prior determination made by the Agency in 1972 on another waste-heat recovery system ("D-1"), and it states that the performance tests on the boilers should be conducted with 100 percent fossil fuel. PPG will conduct the performance test in the boilers in accordance with this requirement.

In connection with this matter, as PPG's legal counsel, we have discussed the operation of the boilers with members of your staff. We also have reviewed an EPA-prepared summary of "applicability determinations" regarding the Agency's NSPS, and we have reviewed the actual text of several of these determinations. As your staff stated, these various determinations "clarify" earlier determinations and the standards themselves. Particularly because of the somewhat informal nature of the reporting system for the prior precedents (the applicability determinations), it seems desirable to set out our understanding of these determinations and of related developments within the Agency.

Mr. White's letter of June 8, 1977, states that PPG is to conduct performance tests with use of 100 percent fossil fuel and without any waste-heat input. Applicability Determination D-35 states: "The continuous monitoring requirements only apply when 100% fossil fuel is burned in any one or both boilers [which also were to use "carbon black waste off-gas input]." Applicability Determination D-69 holds: "A waste heat recovery boiler does not fit the definition of a fossil fuel fired steam generator."

It is our understanding confirmed by members of your staff, *e.g.*, Ms. Vernet, that except for the performance test or other periods when a boiler is operating on 100 percent fossil fuel, the standards for fossil fuel fired boilers would not apply to the operation of PPG's waste-heat boilers in their planned mode which is with a significant heat input from turbine exhaust gas. EPA's standards division (Triangle Park), we are informed, is working on development of new source standards for waste-heat boilers and of a separate set of new source standards for turbines. Under Section 111(a)(2) of the

Clean Air Act, these standards to be issued in the future would not apply to sources currently built or being constructed.

If the foregoing understandings are not correct, we ask that you so advise us promptly. PPG is making a substantial commitment to waste-heat boiler systems, and for energy and fuel supplies to those systems, and wishes to avoid any misunderstanding with reference to them.

Very truly yours,

/s/ *Charles F. Lettow*  
CHARLES F. LETTOW

CFL/cc

cc: George P. Cheney, Jr., Esq.

[*Italicized material appears as handwritten material in the record*]

UNITED STATES ENVIRONMENTAL  
PROTECTION AGENCY  
Washington, D.C. 20460

August 3, 1977

Charles F. Lettow, Esq.  
Cleary, Gottlieb, Steen and Hamilton  
1250 Connecticut Ave., N.W.  
Washington, D.C. 20036

OFFICE OF ENFORCEMENT

Dear Mr. Lettow:

Your letter of July 18, 1977, requests confirmation of your understanding of EPA's requirements regarding the applicability of new source performance standards for fossil-fuel fired boilers (40 CFR § 60.40 *et seq.*) to the operation of PPG's Lake Charles, Louisiana waste-heat boilers.

This letter is to confirm your understanding: (1) that except for the time of the performance test or other periods when a boiler is operating on 100 percent fossil fuel, the standards for fossil-fuel fired boilers would not apply to the operation of PPG's waste-heat boilers in their planned mode of operation (significant heat input from turbine exhaust gas); and (2) that any new source performance standard for waste-heat boilers which would be proposed and promulgated in the future would not apply to PPG's Lake Charles, Louisiana waste-heat boilers which commenced construction prior to the proposal date of the new standard.

If you have any questions on this matter, please contact Doug Farnsworth of my staff at (202) 755-2570.

Sincerely yours,

/s/ *Edward E. Reich*  
EDWARD E. REICH, Director  
Division of Stationary  
Source Enforcement  
(EN-341)

CONFLICT  
WITH D-1

[Italicized material appears as handwritten notation in the record; some handwritten notations omitted]

MEMORANDUM TO FILES August 17, 1977

SUBJECT: NSPS Determination for PPG's Lake Charles, La., facility

FROM: Doug Farnsworth, Attorney-Advisor

I called Mr. Douglas Kliever, a partner at Cleary, Gottlieb, Steen and Hamilton, counsel for PPG, on August 8, 1977. I informed Mr. Kliever of the possibility that the determination in our August 3, 1977, letter to Mr. Lettow of his firm would be changed. I told him we would make a decision as soon as possible, but not to rely on the August 3, 1977, letter as an accurate statement of Agency policy.

I received a call from Mr. George Cheney, PPG house counsel, on August 8, 1977. He expressed his displeasure at our possible retraction of the August 3, 1977, letter. I informed him that we would make a decision as soon as possible.

I returned a phone call from Mr. Charles Lettow, counsel for PPG, on August 12, 1977, and read part of the letter we intended to mail out that day to correct our earlier letter of August 3, 1977. He requested that we delay sending the letter until after he had a chance to meet with DSSE personnel during the week of August 22, 1977. I responded that we would let him know early next week.

Rich Biondi and I spoke to Charles Lettow on August 16, 1977, and explained that PPG would not have to install monitors for SO<sub>2</sub> or NO<sub>x</sub>. He indicated that because of that decision, no meeting would be necessary.

[Handwritten notations omitted in printing]



UNITED STATES ENVIRONMENTAL  
PROTECTION AGENCY

August 18, 1977

OFFICE OF ENFORCEMENT

Mr. Charles F. Lettow  
Cleary, Gottlieb, Steen and Hamilton  
1250 Connecticut Ave., N.W.  
Washington, D.C. 20036

Dear Mr. Lettow:

A re-examination of our August 3, 1977, letter to you concerning PPG's Lake Charles, Louisiana, waste-heat boilers reveals a misstatement of the applicable regulatory requirements affecting the PPG facility. On August 8, 1977, a member of my staff, Douglas Farnsworth, telephoned Mr. Douglas Kliever, of your firm, to notify him of the possible re-determination.

Our August 3, 1977, letter stated that your understanding was correct

that except for the time of the performance test or other periods when a boiler is operating on 100 percent fossil fuel, the standards for fossil fuel-fired boilers would not apply to the operation of PPG's wasteheat boilers in their planned mode of operation (significant heat input from turbine exhaust gas)

.....

That statement is not consistent with previous EPA determinations in similar cases, nor is it consistent with EPA Region VI's June 8, 1977, determination letter to Mr. George P. Cheney, Jr. of PPG. It is correct that during a performance test the boiler must operate at 100 percent fossil fuel. However, subsequent to the performance test, compliance will be judged on the amount of heat and emissions attributed to the fossil fuel used in the waste heat boiler. Thus, the standards of performance for a fossil fuel-fired steam generator will apply to the PPG facility at all other times after the performance test as well. However, compliance with the standard will be determined based on the heat input from the fossil

fuel and the emissions directly related to the combustion of that fossil fuel. Any heat input or emissions caused by the waste-heat will be disregarded in determining compliance.

As stated in 40 CFR § 60.11(a), compliance with standards shall be determined only by performance tests established by 40 CFR § 60.8. However, sources subject to new source performance standards are required, pursuant to 40 CFR § 60.11(d), "to the extent practicable, maintain and operate any affected facility including associated air pollution control equipment in a manner consistent with good air pollution control practice for minimizing emissions." Since PPG has chosen low sulfur fuel as the method for meeting the standard, the regulations require burning such fuel at all times subsequent to the performance test.

As was indicated to you during your August 17, 1977, telephone conversation with Doug Farnsworth and Rich Biondi of my staff, in-stack continuous monitors for NO<sub>x</sub> and SO<sub>2</sub> will not have to be installed on the PPG facility. However, an opacity monitor must be installed and operational prior to conducting performance tests (40 CFR 60.13(b)). In addition, PPG will be required to perform some form of alternative monitoring. This may include monitoring and reporting on the sulfur content of the fossil fuel burned in the boiler. PPG should contact our Region VI office in Dallas, Texas, to determine the specifics of the alternative monitoring requirements, as well as the opacity monitor.

The second point made in the August 3, 1977, letter which confirmed that PPG's Lake Charles, Louisiana, facility would not be subject to any new source performance standard for waste-heat boilers which might be proposed and promulgated in the future, is accurate in that a standard more stringent than the present one would not be applicable to the PPG facility.

I apologize for the incorrect statement made in our earlier letter. However, the position taken above is consistent with Region VI's original June 8, 1977, determination to PPG. If you have any questions on this mat-

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ter, please contact Douglas Farnsworth of my staff at  
(202) 755-2570.

Sincerely yours,

/s/ *Edward E. Reich*  
EDWARD E. REICH, Director  
Division of Stationary  
Source Enforcement

cc: Director, Enforcement Division  
Region VI  
Jack Farmer, SDB

[Italicized material appears as handwritten material  
in record; some handwritten notations omitted]

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[PPG Emblem]

INDUSTRIES

PPG Industries, Inc./Industrial Chemical Division  
P.O. Box 100/Lake Charles, La. 70601

September 6, 1977

CERTIFIED MAIL—RETURN  
RECEIPT REQUESTED

Ms. Adlene Harrison, Administrator  
U. S. Environmental Protection Agency  
First International Building  
1201 Elm Street  
Dallas, TX 75270

Re: Waste Heat Steam Generator  
Notification of Initial Start-up

Dear Ms. Harrison:

In compliance with paragraph 60.7(a)(3) of 40 CFR  
60, Standards of Performance for New Stationary  
Sources, this is to advise that initial start-up of the first  
waste heat boiler of Powerhouse C at PPG industries,  
Inc., Lake Charles, Louisiana facility, was achieved on  
August 24, 1977.

Yours truly,

/s/ *James E. Wyche III*  
JAMES E. WYCHE III  
Coordinator Environmental Systems

/as

cc: J. F. Coerver  
Louisiana Air Control Commission

G. P. Cheney, Jr.  
PPG Industries, Inc.

[Handwritten notations and date received  
stamps omitted in printing]

SUPREME COURT OF THE UNITED STATES

No. 78-1918

ADLENE HARRISON, ETC., ET AL., PETITIONERS,

v.

PPG INDUSTRIES

ORDER ALLOWING CERTIORARI. Filed October 1, 1979

The petition herein for a writ of certiorari to the United States Court of Appeals for the Fifth Circuit is granted.